American Vocational Association

NEWS BULLETIN

VOLUME VI NUMBER 1

LEAN FORWARD!

PUBLISHED IN INDIANAPOLIS, INDIANA FEBRUARY, 1931

All the Way from England

ALL the way from England, across the Atlantic by steamship, up the Mississippi and Illinois rivers by steamboat, overland by wagon 40 miles to the blacksmith shop of John Deere in the little frontier village—thus had come the steel.

It was a notable event to the pioneer villagers and farmers.

They were all talking about the shipment.

Steel was scarce and high priced.

For a hundred years there had been no improvement over the slow, costly Huntsman process of making steel.

It was years before the coming of the Bessemer process, the Siemens-Martin process and the open-hearth process.

England, with an annual output of less than 50,000 tons, controlled the steel markets of the world.

In young America, no dependable source of good steel was available at any price.

But John Deere, foreseeing the importance of his steel plows, had worked out his specifications and ordered plow steel from England. From a broken mill-saw blade he had built the world's first successful steel plow, in 1837. For a few years he had made plows from saw blades and other products gathered from all accessible points. He wanted a source of supply in keeping with his vision of a wilderness conquered by the steel plow.

And here was the steel ready for his craftsmanship; steel that cost more than $300 a ton delivered; slabs of steel from each of which this energetic young blacksmith could cut material for six moldboards and shares—the first shipment of plow steel from a steel-maker to a plow-maker since the world began!

Gone was the uncertainty of depending upon old saw blades for plow bottoms. No longer would there be the crudities of construction due to improvised material.

JOHN DEERE
MOLINE, ILL.
THE TRADE-MARK OF QUALITY MADE FAMOUS BY GOOD IMPLEMENTS

Here was the highest grade steel that could be secured for making plows—steel rolled to the exact specifications of John Deere—good, thick steel that enabled John Deere to make better plows, in much greater quantities each day.

Thus was the second great step taken in the steel-plow industry—a step that ranked in importance with the building of the first steel plow by John Deere in 1837.

Steel for John Deere plows! It is easy to get today. Great steel mills of America produce it, with all of the latest methods of manufacture. One sees its bright reflection of the sun from moldboard and share, in all sections where plowmen go afield with steel plows—a shining light that tells of the spirit of progress of the blacksmith who founded the steel-plow industry and the John Deere organization which manufactures and distributes to all parts of the world quality equipment for every farming operation.

The American Perfection School Type Cabinet

Fills the bill for schools desiring the best quality combined with compactness and efficiency of operation

No. 870 (in steel only)

The most up-to-date features of composing room furniture are combined in this cabinet of steel construction in olive green finish, with working bank top sloping both ways, and handy lead and slug rack under both edges of the top. Normal accommodations are provided for four pupils at a time in type setting.

Fronts of the cabinet bodies are reversed, making both sides of the cabinet alike, so that the two pupils working at each side have between them a complete equipment of type, spacing materials and galley dump. There is no superstructure above the top to obscure the instructor's view of his students.

Specifications for No. 870 American School Type Cabinet

No. 870—American School Type Cabinet, steel construction, flush base, with double-tier working-bank top sloping both ways, height to working edge 40½ inches, including two No. 2706 blank cases, two No. 2775 quadruple cases and 34 No. 2735 California job cases (all cases with steel cabinet fronts and No. 6070 combination pulls and label holders), two No. 9178-P quarter-size cases and two No. 12631 detachable galley dumps.

Extras for No. 870 Cabinet

No. 870-BX—Wiring for 2 lights over cases.
No. 870-TX—Wiring for 4 lights over top.
No. 870-E—Locking Devices—(one for each tier) for locking all cases (all keys alike).

For prices and further information, address

EDUCATION DEPARTMENT

American Type Founders Company

300 Communipaw Avenue, Jersey City, N. J.

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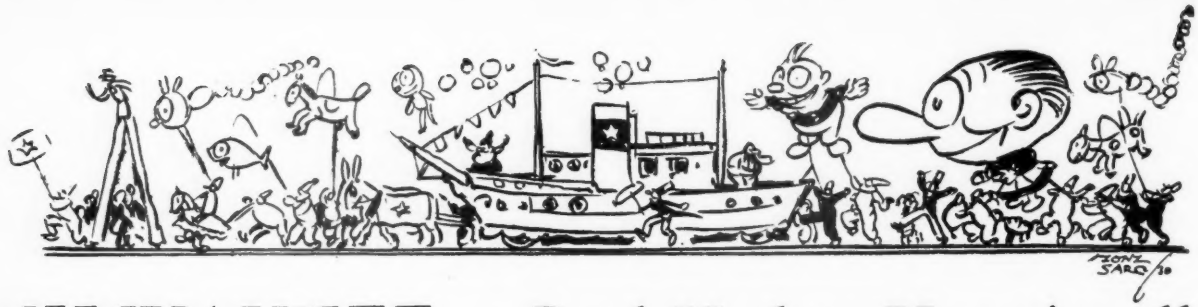

MILWAUKEE—a Real Harbor Vocationally

Being stray thoughts from the Ex-Skipper to his Friend in Iowa

Dear Roy,

Robert Ingersoll once toured the country lecturing on "The Mistakes of Moses". A colored parson in St. Louis gave this spiritual counsel to his flock, "Ah has just one word about what Colonel Ingersoll say. He may be a mighty trooful man, but brethren, remembah Moses war there an' Ingersoll warn't!"

That's how you'll have to accept my slant on a great convention, for surely we were not treated Cooley. As hosts Wisconsin vocational directors passed on to every out-of-the-stater the tangible bounteous hospitality that identifies Milwaukee. It's a pot pouri of Kris Kringle, long clay pipes, red leather chairs, and jovial conversation.

But to our binnacles and barnacles! The Ship hove to off the new sky line and waited for the pilot. The whole city turned out at the wharf and lake-logged easterners who had successfully made the journey with us were hoisted on Wisconsin shoulders and carried triumphantly to the Schroeder (pronounced Shrader for its coffee shop) Hotel.

The streets were so overrun with Texans and Californians that The Ship had to go around by West Allis. The weather was New Orleans sans palmetto if you understand what I mean. At the Auditorium it was necessary to hoist off the roof to hoist in the old hull. There we found Chief Pirate Wahlstrom and his local committee at the winches. In a few hours all the boxes were up from the holds, wares unbuckled and draped from every sky hook and annunciator.

And none too soon. Breaking thru the lines of Tepoorten's registration beauties, the jovial membership, ticket in hand, boarded our decks. From every exhibitor's belt flashed forth a trusty conductor's punch. Soon the air was hazy with the fine mist of paper pellets and Confetti Inc. dropped eight points on Wall Street.

Ed Cherry with New England Coolidgeness assembled the prizes on the hurricane deck where everyone could blow themselves to an anticipatory look. Some confused farmers from the implement show downstairs thought that Hoover had signed the relief bill.

Coming across the lakes there had been a little mutiny by way of diversion. The Crew felt as a man that the time was opportune to elect a new skipper. As I recall the incident, they had begun to take away the plank on which I was playing Blind-Man's-Bluff. Thoughtful of my health, someone proposed me as some sort of door, —steve or common, the exact status has slipped from my sketch book.

That evening the new officers were installed. Ralph Newing was lustily cheered as he buckled on the cutlass and adjusted the black bandana over one eye. Ralph has a host of friends who wish him bon voyage for his two years at the Wheel. George Farnham is the new First Mate, John Claude continues as Second Mate, Dudley Full will be Chief Radio Officer, Gordon James, Purser. You all know Fred Gross, Helmsman, a lusty seaman who knows his planes. Paul Goward writes the Log, and Bill Milliken runs the galley on water biscuits and salt pork. Come over for dinner sometime.

Friday afternoon the A.V.A. quite graciously conceded to The Ship. It gave us an opportunity to express slightly our appreciation of the support every member gives us. The camaraderie that identifies our relationship is fine gold.

First Class Passenger Dennis opened the meeting with his usual suavity altho I am sure we Ship members do not deserve all his praise as much as we should like to be worthy of it. Newing extended the right hand of First Class Passengership to Paul Chapman whose amicable Southern personality is truly magnetic.

Any success of the entertainment is the result of John Claude's efforts to assemble picturesque local color and customs. Polish folksongs, German figure dances, scenes from operas, all with names that would turn a Harvard accent into the semblance of a plumber opening a cantankerous sink. Included was famous Chris Deutsch, international champion of open-air zither players whose ambidexterous fingers dashed hither and zither. The German dances were athletic affairs, combining the half nelson, hammerlock, toe hold, with old fashioned London-Bridge-Is-About-To-Go-Oof.

The prize awards included some incongruous donations of welding sets to agriculture instructors and basketball bags to fair home economics enthusiasts. In the main the plunder hit the mark. Doubtless wives have wondered over boxes of candy and desk sets, toasters, chests of tools.

Yes, the banquet was the high point of the convention. The food was delectable, fresh from the lake. The menus were charming. The main address came from the heart of a woman of vision. Roll call of the states brought answering cheers, with Canada heard from. Dennis was bowled over by his friends in their presentation of a Life Membership. O'Leary-Hambrecht commendations were well delivered. Wisconsin rang the bell to innumerable life memberships, in fact they ran out of prospects.

More than ever the "fair" brought charm and added interest to the evening. Many a knee, weary from school inspection, was bent with gusto and enthusiasm when the orchestra took over the reins after midnight. Many a bed time story was missed as the music raged on to greet the one-o'clock man on his rounds.

Now as The Ship runs before the wind, with New York as her port, the sun is dipping behind the Milwaukee skyline, casting over that city a thankflu glow of recognition for opening a new day in vocational education. The sky is red with the promise of fair weather ahead.

Nautically yours,

WALDO WRIGHT, *Commodore, The Ship*

American Vocational Association
NEWS BULLETIN

VOL. VI FEBRUARY 1931 NO. I

PUBLISHED QUARTERLY BY THE AMERICAN VOCATIONAL ASSOCIATION

THE COMMITTEE ON PUBLICATIONS

R. W. GREGORY, CHAIRMAN
ROOM 225 STATE HOUSE

ADDRESS COMMUNICATIONS PERTAINING TO ADVERTISING to STUDIO PRESS, *Publishers* 340 Century Bldg. Indianapolis

Z. M. SMITH, SECRETARY
INDIANAPOLIS, INDIANA

ANNUAL SUBSCRIPTION PRICE TO MEMBERS OF THE ASSOCIATION, TWENTY-FIVE CENTS

ENTERED AS SECOND-CLASS MATTER SEPT. 8, 1926, AT THE POST OFFICE AT INDIANAPOLIS, IND., UNDER ACT OF MARCH 3, 1879

THE PRESIDENT'S MESSAGE

CHARLES M. MILLER, *President of the American Vocational Association, Topeka, Kansas*

Vocational Education in this country has grown from a number of small isolated beginnings into a great National educational institution. Last year more than a million boys and girls and men and women were enrolled in federally aided classes. Not only were the lives of these who were actually enrolled touched and enriched but the lives of the members of their families were influenced. In fact it would be impossible to determine just how far reaching the influence of this movement actually is.

The American Vocational Association is an organization through which vocational educators throughout the country seek to crystalize their thinking in the field of Vocational Education and through which they attempt to interpret to the public the aims and objectives and significance of a national program of Vocational Education. Doesn't it give you something of a thrill to know that you are a member of an organization whose ideals are so high, whose usefulness is so great, and whose influence will live on through the ages? If you will ponder on the thing for a bit, I believe you will be thrilled with the thought. Or if you don't happen to be a member, doesn't it make you want to become a member?

If we are to serve our cause most effectively, there are some very definite things to which we must give our attention during the present year. Perhaps the most important thing confronting us at this time is the problem of recruiting memberships of the several classes provided for in our constitution and by-laws.

In my opinion it is not too much to expect that we should increase our annual memberships by at least fifty per cent by the time of the 1931 convention. This will give us additional funds with which to carry on our work but of greater importance than the funds is the fact that we shall have fifty per cent more people keeping in touch with the progress of Vocational Education and helping to boost for it. There were 24,876 teachers in federally aided classes last year. Subtracting from this the evening school teachers (many of whom could not be expected to become members), there are enough teachers in all-day and part-time classes to increase our membership fifty per cent or more. Besides these, there are many other persons eligible and available for annual memberships.

C. M. MILLER

A little more than a year ago the first Life Membership was registered. Today there are only a few less than a hundred. It is not at all impossible that we should have a thousand Life Memberships by the time we convene in New York City next December 9th. If I did not know so well the temper and attitude of the Vocational Educators of this country, I should consider that a ridiculous statement. But I've seen them in action. I know what it means when they set for themselves a task. I'm actually expecting a thousand Life Memberships to be registered within the year.

Elsewhere in this issue a new plan for Life Memberships is explained and outlined. Also plans have been made for Memorial Memberships of one hundred dollars or more. Still another is a plan for accepting Life Memberships from vocational schools. Dr. R. L. Cooley has said that there should be at least a thousand schools in this country capable of and willing to take out a Life Membership. I think he is right as usual.

All the money collected for Life, Memorial and School Memberships will be accumulated in an endowment fund, the income from which is finally to be used for the employment of a full-time secretary; a thing which is badly needed now but which cannot be realized until our finances are materially strengthened. It would be foolish for the organization to encumber itself with a full-time secretary until funds are available for his salary and office expense.

A nation-wide plan for recruiting memberships will be announced in the next few weeks, if not by the time this reaches you. It will probably not be

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Topeka, Kansas

Z. M. SMITH, *Secretary*
State Director of Vocational Education
Indianapolis, Indiana

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THE NEWS BULLETIN

Published by The American Vocational Association

R. W. Gregory, Editor
Room 225, State House
Indianapolis, Ind.

Z. M. Smith, Business Manager
Room 225, State House
Indianapolis, Ind.

THE MILWAUKEE CONVENTION

Many members of the American Vocational Association know and respect Dr. Cooley for the fine service he performed in the interests of Vocational Education while serving as the President of their Association through two terms. Those who were fortunate enough to be able to attend the Annual Convention of the Association in Milwaukee last December have had further evidence as to the leadership of this man. Dr. Cooley as Director of Vocational Education in Milwaukee has built up a truly great administrative organization which has developed a wonderful school. They are housed in one of the greatest school plants in the United States. The entire emphasis of this educational organization is placed upon part-time education, training for those who must earn while they learn, a most humanitarian thing.

Further evidence that the American Vocational Association did not go wrong when three years ago they entrusted their problems to Dr. Cooley's leadership is to be found in the way Milwaukee and Wisconsin "put on" the Convention. From start to finish it "clicked", never missing a stroke, smooth running and efficient. Dr. Cooley was Chairman of the Convention Committee.

We enjoyed our visit in Milwaukee and we take this keen delight in so expressing ourselves. Our hats are off to Milwaukee, Wisconsin and Dr. Cooley and his Committees.

After the "Wisconsin flood" is the way future Life Members of the American Vocational Association will speak when they refer to the date of their becoming Life Members. We had a notion that a shower was imminent but not such a cloud-burst.

THE NEW PRESIDENT

When a man elected to high office, inaugurates his place of trust and responsibility with a story referring to the sacred recollections of youth and a loving father and an old jack-knife it argues well for that organization which trusted itself to his leadership. That my friends is what we have to say in officially introducing C. M. Miller to you as your New President. You will know by the end of the year how fortunate you are!

Mr. Miller was farm reared having grown up on a farm in Crawford County, Kansas. His early school training and teaching experience were in the schools of that County. He graduated from the Crawford County High School in 1928 at Pittsburg, Kansas. Following his rural school teaching experience he taught industrial courses and directed evening courses for railroad shopmen at Parsons, Kansas from 1912 to 1916. He became Principal of the Labett County High School at Altamont, Kansas. This school was one of the first six in the state to organize and establish Vocational Education under the provisions of the Smith-Hughes Act.

Mr. Miller attended the first conference called by the State Department of Education for Kansas for outlining a plan for the development of Vocational Education in Kansas under the Smith-Hughes Act. Due to his broad experience in Vocational Education prior to the passage of the Smith-Hughes Act, he was immediately accorded leadership responsibilities and in 1922 he was appointed State Director of Vocational Education in Kansas.

In addition to his Bachelor of Science degree in Education from the Kansas State Teachers College at Pittsburg, Kansas, Mr. Miller holds a Degree of Master of Science from the Kansas State Agricultural College. In 1928 he was President of the National Association of State Directors of Vocational Education. He has been a member of the Legislative Committee of the A. V. A. for three years and during the past year has served as Chairman of the Legislative Committee.

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the best plan that could be made but it will be the best we have been able to devise at this time. Any plan will work if we work the plan.

Another thing to which I think we can well give some attention is that of building the American Vocational Association into an even stronger organization from the standpoint of cohesion among groups. We can function better as one strong organization than as a number of loosely joined separate groups. I do not mean that groups of people with common interests should not organize for more effective work as groups but I believe that such organizations should recognize the American Vocational Association as the parent organization and should subordinate themselves to it. Their programs should be a part of the American Vocational Association program and to avoid confusion should clear through the Vice President most nearly representing the interests of the group in question. Programs arranged independently often cause conflict and confusion.

You will be interested in knowing that a meeting was held in New York City January 9th to make preliminary plans for the 1931 session of the American Vocational Association. Indications are that the 1931 convention will be the biggest and best the organization has ever held. It should be, for the American Vocational Association is a young and growing institution. The next convention will have to be the best yet if it holds its own.

New York City has several advantages over almost any other city for entertaining the convention. In the first place there are thousands of vocational teachers within reach. Then, there is an abundance of talent available. In fact all of the facilities necessary for a convention are there, so unless this convention is the best ever, New York will not have done as well as the other cities. The point is that without any disposition to out shine or out do other cities or other administrations, we must go forward; otherwise we will be slipping. Let's go!

Dr. Smith Appointed

Dr. Z. M. Smith, secretary of the A. V. A. and state director of vocational education in Indiana, has been appointed by Dr. William John Cooper, United States Commissioner of Education, to serve on the committee to make a NATIONAL SURVEY OF THE EDUCATION OF TEACHERS. This survey was provided for by Congress last year with an appropriation of $200,000. The study will cover a period of three years and will cover qualifications of teachers, supply of available teachers, and facilities available and needed for teacher training including courses of study and methods of teaching.

MEETING OF THE A. V. A. HOUSE OF DELEGATES, MILWAUKEE, WISCONSIN

December 11, 1930

The meeting was called to order by President Paul W. Chapman with appropriate remarks concerning the arrangement for a session devoted exclusively to the meeting of the House of Delegates.

This statement was followed with a report by Treasurer Chas. W. Sylvester, which in turn was followed with a favorable report of the auditing committee.

TREASURER'S REPORT

December 1, 1929, to November 30, 1930, inclusive

RECEIPTS

Balance in bank, Nov. 30, 1929		$12,954.97
Affiliated memberships	$9,048.55	
Direct memberships	133.00	
Life memberships	1,600.00	
Publication sales	201.46	
Proceeds New Orleans Convention	1,875.00	
Advance Proceeds, Milwaukee Convention	2,670.00	
Interest	283.73	
Miscellaneous	49.93	15,861.67
		$28,816.64

DISBURSEMENTS

Salaries	$2,935.68	
Travelling Expense	2,737.35	
News Bulletin	2,276.35	
Printing and Stationery	1,017.09	
Telegrams	10.37	
Miscellaneous, New Orleans Exhibit	1,061.52	
Miscellaneous, Milwaukee Exhibit	50.00	
Check Protested	160.00	
Postage	912.99	
Treasurer's Bond	37.50	
Miscellaneous, including storage	782.63	
Legislative expense—Travelling	3,103.45	
Miscellaneous	470.82	15,555.75
Balance in Bank, Nov. 30, 1930		13,260.89
		28,816.64
Balance in Bank		13,260.89
Treasury Notes		3,000.00
		$16,260.89

President Chapman then called for a report by Secretary Z. M. Smith.

The first part of the report of the secretary consisted of reading the list of states and the number of A. V. A. members in each.

He then made a brief statement concerning the life membership in the A. V. A. He explained that when he first presented to the A. V. A. Executive Committee, two years ago, a proposal to inaugurate a campaign for life members, the Committee did not readily approve the proposal. The proposal was sustained vigorously by Dr. R. L. Cooley, who at that time was president of the organization. The committee authorized the secretary to formulate a plan for securing life memberships and to use the News Bulletin in presenting it to the members of the Association and others. Mr. Smith pointed out to the Executive Committee, in presenting his proposal, the need for an endowment from which an annual assured income could be realized which would make it possible for the A. V. A. to employ a full-time executive secretary. He expressed the belief that with an endowment of $150,000.00 or more, the Association would be in position to solicit, with success, memorial gifts and bequests that would enable the association to increase the endowment fund more rapidly than could be done through life memberships alone.

A part of the plan which Secretary Smith proposed for securing life memberships was not approved by the Executive Committee, namely, the provision for payment of the one hundred dollars in installments, the obligation for payments to be certified in the form

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An Indorsement

January 15, 1931.

Senator Arthur Capper,
United States Senate Building,
Washington, D. C.

My dear Senator Capper:

I have not kept in touch for the last few days with Senate Bill 3969 providing additional funds for trade, industrial, and commercial education. As president of the National Education Association, I wish to give my hearty endorsement and urge that the committee, if it has not already done so, report the bill out favorably at once in order that it might have a chance to pass this session.

Vocational education is the greatest immediate means of aiding depression and restoring confidence which the educational world has. We are doing our best through education to prepare the children of the nation for the right kind of attitude toward the government and toward work, but vocational education is immediately preparing thousands of people for new jobs and for new situations and adjusting them into the new order of life. I do not know of any one thing in the entire nation that so thoroughly deserves the commendation and support of the Senate and House of Representatives as this bill providing additional funds for trade, industrial, and commercial education.

Very sincerely yours,

Willis A. Sutton,
President, N. E. A.

WAS:S

NATIONAL EDUCATION ASSOCIATION
Department of Vocational Education
Detroit, Michigan

President—Dr. Z. M. Smith, State Director of Vocational Education, Indianapolis, Indiana.

Secretary—O. D. Adams, State Director of Vocational Education, Salem, Oregon.

2 P. M. Tuesday, February 24, 1931

Music:—Detroit Public Schools

Vocational Education as Preparation for Citizenship in a Democracy—R. L. Cooley, Director, Milwaukee Vocational School, Milwaukee, Wisconsin

Preparental Education—Dr. E. Lee Vincent, Merril-Palmer Institute, Detroit, Michigan

Vocational Education an Integral Part of a State Program of Public School Education—E. C. Giffen, State Superintendent of Public Instruction, Pierre, South Dakota

2 P. M. Wednesday, February 25, 1931

Music:—Detroit Public Schools

The Place and Importance of Research in Trade and Industrial Vocational Education—Dr. W. H. Stone, Head of Department of Industrial Education, Ohio State University, Columbus, Ohio

Objectives and Methods in Training Teachers of Home Economics—Mary Beeman, Head of Department of Home Economics, Ball State Teachers' College, Muncie, Indiana.

The Obligation of Society to Provide Vocational Training for Employed Youth—C. A. Fulmer, State Director of Vocational Education, Lincoln, Nebraska

Continued from Page 5

of an interest bearing promissory note. Later the committee approved the plan for one year with the modification of eliminating the interest bearing provision of the note.

Mr. Smith further recommended the incorporation of the American Vocational Association in order to strengthen its business management and to inspire confidence in such management in the minds of potential donors to the endowment fund. By action of the Executive Committee and the House of Delegates at New Orleans, the Association was incorporated under the laws of the State of Indiana.

The secretary reported that twenty-five life memberships had been secured during the year and predicted that by December, 1931, the number would be increased to at least 150. (At the banquet session the following evening, Wisconsin presented 60 life memberships to the A. V. A. treasury.)

At one of the sessions of the A. V. A. Executive Committee in Milwaukee, Secretary Smith was instructed to prepare a pamphlet for use in further prosecuting the drive for endowment. The committee authorized the provision for installment payments on life memberships and provision for memorial endowment gifts and bequests, thus approving the recommendations made by Secretary Smith two years ago.

The next item of business was the report by Mr. George P. Hambrecht, chairman of the cooperating committee, to consider the report of the National Advisory Committee on Education.

REPORT OF THE COOPERATING COMMITTEES OF THE AMERICAN VOCATIONAL ASSOCIATION AND THE NATIONAL ASSOCIATION STATE DIRECTORS OF VOCATIONAL EDUCATION CONCERNING THE "MEMORANDUM OF PROGRESS" SUBMITTED BY THE NATIONAL ADVISORY COMMITTEE ON EDUCATION.

The "cooperating committees" of the American Vocational Association and the National Association State Directors of Vocational Education have reviewed the "proposals for action" recommended by the National Advisory Committee on Education and printed in the Memorandum of Progress issued by the Committee July 4, 1930, also Circular N-109, dated November 4, 1930, supplementing the Memorandum of Progress.

After giving careful study and consideration to the recommendation that all existing laws granting federal aid to the states for educational purposes be repealed, and that there be substituted in lieu thereof one unallotted annual grant amounting to $2.50 per child under 21 years of age, the "cooperating committees" of the vocational associations have reached the conclusion that the proposals made by the National Advisory Committee are unwise and, if enacted into law, would not result in the uniform improvement of the American educational system for which the proponents of the proposals are contending, and, beyond question of doubt, would prove to be an insurmountable handicap in the further development of a program of vocational education which will adequately meet the training needs of the farmers, homemakers, clerical workers, non-professional workers, and handicapped civilians of the United States. These conclusions are based, in part, upon the following convictions growing out of years of experience:

The recommendation for the repeal of the existing laws which now grant federal aid to the states for educational purposes would imply that these laws have failed to accomplish the purposes for which they were intended. In view of the fact that the existing laws in question deal only with vocational and technical education, as well as with civilian rehabilitation, it would seem feasible to assume that the National Advisory Committee on Education, before it could expect Congress to consider its proposal seriously, would have to submit convincing evidence to show that the Land-Grant colleges and vocational schools and classes are not at the present time rendering a service which is satisfactory to the persons for whom this training was designed. No such evidence has been submitted; nor have any such implications been made in the publications of the committee.

During the first 140 years of the nation's history only eight states made any provision for a program of vocational education. At the present time, after 13 years of federal assistance, notwithstanding the fact that every state in the nation and Hawaii have vocational programs that are reaching annually approximately one million persons, we are providing vocational training for only one in each fifty among those minors who have dropped out of the full-time school, for only one in four hundred among the nation's adult workers, and for only a part of those enrolled in high school who desire such courses. This condition indicates that the problem of vocational training should not have the special emphasis removed which the present "federal-state" laws now provide.

Juvenile crime, national unemployment, and changing conditions involving complex problems of adjustment, are of such tremendous import in relation to the prosperity and further development of the nation that Congress will doubtless devote more rather than less attention to an attempt to find the solution. Because a program of vocational training adequately conceived deals specifically with these problems both in their technical and social phases, it would not seem feasible to deal with this phase of our educational program without national vision. We maintain that federal funds shall be directed to these problems by bringing special emphasis to this type of education; that these funds be safeguarded; and that minimum standards be maintained through the assistance of a central agency which shall be representative of agriculture, industry, commerce, labor, and the home.

We feel that many of the conditions, questions, objections, and implications contained in the statement prepared by the Executive Committee of the Land-Grant colleges apply to the field of vocational education; and we concur in the position set forth in the preliminary comments of that association relative to the proposal for action which was published during September, 1930.

We are in accord with the general proposal to increase the federal facilities for research in education.

We are also in hearty sympathy with the proposal to increase the federal grants for education provided such grants be in addition to the appropriations designated specifically for vocational education. The states have developed reasonably uniform standards in elementary and general secondary education. We do not feel, however, that the states have yet had sufficient experience in vocational education, the vocational rehabilitation of handicapped people, and part-time schools maintained for juvenile and adult workers, to alone determine efficient standards for the work. We recommend that the Federal Board for Vocational Education continue to maintain minimum standards for the expenditure of federal money by the states until such time as experience indicates the advisability of withdrawing these standards.

We recommend that, as a minimum, the amount provided under the present federal acts and the amount included in the Capper-Reed Bill, now pending before Congress, and the minimum provided for civilian rehabilitation, set forth in the Metcalf-Reed Bill, continue to be designated specifically for vocational education and vocational rehabilitation and that no change be made in existing legislation for vocational education in regard to the requirements concerning the state matching of federal funds for vocational education.

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The OBLIGATION of VOCATIONAL EDUCATION TO BUSINESS*

WILLIS A. SUTTON
Superintendent of Schools, Atlanta Georgia, and President of the National Education Association

I want to talk to you a little while about the obligation of vocational education to the business world. In order to try to do that, I feel it is necessary that we analyze the situation as it exists today and assign some reasons for this unusual depression.

BUSINESS—and I say it tonight without any reflection, without the least bit of bitterness and with no aim at controversy—*business has failed. Business has failed in that it has not provided the thing that business exists for.*

In other words, it should provide a place for a man to work, wages that provide a living, give him an opportunity to express that which is within him through his labor and to find compensation for him and his family through that effort. That is the business of business, and if we take that as the business of business, I am forced to say that to a very large extent, certainly to ten, twenty percent of the people today, it is a failure and possibly to thirty, or to forty percent more of them, it is a partial failure.

If the school people of America had erected three times as many school houses as were required to house the school children of America, and if the superintendents of schools like Potter at Milwaukee, Bogan at Chicago, O'Shea at New York, or any of the smaller places, had been guilty of providing three times the amount of equipment that was necessary to teach the childhood of America, the Chambers of Commerce of America, the business men of America, would have said throughout the press and from the platform and on the street, that the school people are visionary, impractical, idealistic and absolutely ignorant of their job. I say to you tonight that if every automobile factory in America ran three hundred days at eight hours per day, they would produce three times the number of automobiles that we could possibly absorb.

I say that if every shoe factory in the United States of America ran three hundred days a year, eight hours a day, every man, every woman and every child in the United States would have to wear at least nine pairs of shoes every single year.

I say that if every single loom and textile industry in the United States were to run three hundred days in the year at eight hours a day, it would be necessary for us to multiply our purchases by five and one-half. Possibly business will come back and say to us, 'We did not know that this collapse was coming.' If the school man had built three times as many schools, he might also say, 'I thought three times as many people might move in, but they did not.'

I say to you tonight and I say it, ladies and gentlemen, with no bitterness whatsoever, but as a positive statement of fact, that we have glorified American business to the extent that even the housewife, even the girls in the country, even the boys on the farm, have felt and do feel that business is the one thing they should get into and that they should leave everything else in order to take part in it.

I am not opposed to business and I want it to go on, and that is what I am going to talk about, but I do want to make it very clear to you tonight that we as educators must help business rehabilitate itself. Business is on its knees to politics and education tonight. If you don't believe that, go up to Washington and listen to what they are saying. We are trying by voting appropriations, we are trying by every conceivable means to do what organized business was established to do. If business had been on its guard even in the drought stricken areas, (I am not opposing the appropriation,) if business in industry had been on its guard in the accumulation of its surpluses and in the accumulation of its profits, if business had been on its guard, in even the devasted, storm-ridden, drought-stricken, flooded territory of the United States, business could have cared for what we are now asking the government to take care of.

What has made American business? Three things, chiefly. The first one of them was the virgin soil and virgin resources of this country, which seemed inexhaustible, whether they were resources of the fields, of the forests, of the mines, whether it was water power, or what it was that we had in America, it was in such abundance, so rich, so free, so untouched, that it made us almost stagger under the

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THE NATION'S DEBT TO THE FARM HOME*

By MRS. CHARLES W. SEWELL
National Director, Home and Community Work, American Farm Bureau Federation

To farm homes of the past, much of the stability of our Nation is due and we have every reason to believe that the farm homes of today and tomorrow have a corresponding contribution to make.

A quarter of a century ago, the boundaries of town and country were very clearly defined. The city held attractions and temptations; the farm home was far removed from these and if your young people could be kept on the farm, our worries as to their safety were considerably lessened. Today it is most difficult to determine where one leaves off and the other begins. Farm boys and girls attend city schools, form their associations and friendships in the town and consequently come under much the same influence as those of the residents of town and city.

The problem of both mothers then becomes very much the same. It is just as important to the farm folk living near here that the schools of this city are one hundred per cent; that health and sanitation are safeguarded and that the social life and amusement of the young people are properly safeguarded and wholesome.

American agriculture has been and now is undergoing a terrible crisis. On the policies adopted rests the future not only of agriculture, but of the Republic as well. Agriculture is our basic industry. On its economic condition depends the standard of its homes and community life. If American women of both city and country arouse themselves to study existing condi-

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THE OBLIGATION OF VOCATIONAL EDUCATION TO BUSINESS

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wealth as we tried to count it. So we had in this country an era of prosperity based upon our virgin soil, based upon our forests, based upon our mines, upon all of the resources of a new country that for thousands, multiplied millions of years lay untouched except by the sun.

The second thing that made business was immigration. Into this virgin country came people from every land. I am not so sure, my good friends, that we are right in restricting immigration, when I think of the multiplied thousands and thousands of acres, of the multiplied needs of thousands of people in the thickly populated districts of the world, when I think of what they would bring to us in increased buying power and wealth.

I am not in favor of opening the door and letting everybody in, but I am not so sure that we have done the right thing especially to restrict a great many of the people of nations who would be wonderfully helpful to us.

If there is any one thing on the face of the earth that stirs my blood and makes it boil, it is for a handful of folks who think they have descended from a few people who came down in the Mayflower or landed in Jamestown, Virginia, to think that they are the folks in America and they made it...

Four millions of people pouring into this country per year, coming to this country without anything—even coming here without a reticule—made business.

Some people don't know what a reticule is. I don't expect you know what a reticule is. When I used to go to church with my mother, she always carried a reticule, a little satchel, in which she carried little tea cakes. These people came to this country without a grip, they came without baggage, they came only with the clothes they had on. They came from countries where they made from twenty cents to a dollar a day.

They came into a country where wealth was abundant, where work was plentiful, where timber and land and country were to be subdued. They leaped into the two, three, four and ten dollar a day jobs almost instantly. They needed everything, they had no furniture, they had no house, they had very few clothes, they had none of the great necessities or luxuries of life and they became the greatest buyers on the face of the earth and they made business.

There was a third great source of wealth—it was the native productivity of our own people. We had large families; my mother's family for example, had thirteen in it; my own family had eight; my father's had fourteen. For several generations the native stock of America brought into the world large groups of people who not only produced, but who bought and as they bought, created business.

With our native resources diminished, with immigration cut off, and with native productivity declining, business became depressed. We tried three expedients to revive it.

The first was high powered advertising, creating a desire on billboards. You could not ride down a highway in America to save your life but what a thousand signs flashed on the eye the things we had to sell. Newspapers, magazines, the electric lights, everything was used to create within the minds of men the thought, 'I must possess certain things'. This helped to create business even when these other three things lagged.

When that commenced to fail, we put out under that sign and backed by that sign the high pressure salesman, who went out to sell everything on the installment plan, a dollar down and a dollar a week until you die. We tried another expedient— we allowed people at exceedingly low rates of interest to go wild in speculation and we reduced those rates that we might go wilder and wilder. There were men and women all over America who were anxious to borrow money to put into a legitimate business, who found they could not get it, even at six, seven, or eight percent, when money for speculation was as low, sometimes, as two percent. Under that kind of enormous pressure, with the idea that we might get a little bit more tomorrow, the whole world took on the aspects of a Florida boom and went crazy!

There had to come a collapse and it came.

Now, ladies and gentlemen, what is going to be the rehabilitating force? I am going to say this to you tonight, the one thing that is going to stabilize business and the one thing that is going to produce it on a stable basis, gradually, is the one thing that you men and women are engaged in doing,—it is vocational education.

The cave men don't want any books, they don't want any rugs on their floors, pictures on the walls, they have no use for Frigidaires, they don't want a radio, they have no use for a piano or other musical instruments, they do not buy Pullman tickets, they are not going to call up over long distance telephone, they are going to live in their present condition. But the minute we begin to lift that caveman in the scale of life, we create new desires and he says, 'I want a house,' and we make the real estate business; he says, 'I want that house furnished,' and we create the furniture business and hardware business and then we get that man up to the second, or third, or fourth grade, and he has greater and greater desires and when we bring him to the average of the seventh grade education, we have increased his desires so that not only does he say, 'I must have these things that create business,' but he has the power, also, to create the wealth to get those things.

Education is the only double barrelled proposition I know of that creates the desire for better things and at the same time makes possible the gratification of that desire.

What we need to do in this country is to realize that education is not simply the learning of the three R's, nor the carrying on of the arts and sciences. I read the other day, and I am sorry I read it, of a great man criticising an institution like Columbia for having a course in life insurance and in banking. He said, 'There is nothing educational about banking, there is nothing educational in life insurance,' and I said to him, 'What is education?' and he commenced to talk to me about the old vocations, of ministry, of teaching, of preaching, of medicine, of law; 'These,' he said, 'are educational.'

I said, 'My friend, every one of them is vocational, and if the State of Georgia has a right to tax its citizens to educate lawers to plead in its courts, or medical doctors to practise, it certainly has an inherent right to take the tax money to make better farmers and make better artisans and make better industrialists and make better men and women who are producing the wealth that needs to be taxed and will be taxed in order to support the whole educational structure.'

You know, it has been a wonderfully strange thing to me, something I never have been able to understand, that we always look at things backwards. Why on earth America, for example, three or four thousand miles away from any language except English and only a few of us ever going to speak any other language at all, why spend in the schools of America enough money teaching foreign languages and dead languages to give vocational education to all our people.

I don't want you to think I am opposed to Latin. I taught it for sixteen years. I taught Bobby Jones Latin (I did not teach him golf but I did teach him Latin) and he was a great Latin student, too.

I am not opposed to other languages. A man who learns other languages learns new thoughts that are really worth while. So far as I am concerned, I would rather teach a girl to make a more beautiful family, to be artistic in the things she shall weave with her hands or make into a dress; I would rather teach a boy going into the metal trades or going into automobile manufacutring to make things that will serve humanity and at the same time

make the extra dollar, that will bring not only bread but luxury to his family, than teach all the foreign languages on the face of the earth.

I have said in my own state, and I will repeat it here, that if I had my way, I would rather put just one little extra taste into a Georgia peach or an extra flush into a Georgia apple, if I knew by doing that I was lifting the economic basis of my people to where they could appreciate and enjoy life, than to teach them all that Plato and Socrates ever wrote and see them die in rags and squalor.

I rode the other day through a situation that broke my heart. Going from Louisville, Georgia, to Auguata and taking a little bypath, I lost my way. There was a great field of cotton, higher than my head and a woman stood in it, with two girls, picking. A great, wonderful pair of girls, and the woman, I am sure, was not more than thirty of thirty-five years of age, although she looked older. I stopped to inquire my way, and as I did so, I remarked that it was a fine field of cotton and she answered, 'Yes, sir, we are making thirty bales off of twenty acres,' and I said, 'That is fine—wonderful.'

Then I looked at her, and there stood that woman in cotton that was far above her head, making a bale and one-half to the acre, and yet she and those two daughters stood picking that cotton in tatters and dirt and filth and rags.

The tragedy of that thing appealed to me as never had anything in my life—there they were, making enough cotton to clothe in beautiful fabric a whole village, but they were not getting one single ounce of it.

What that woman needed and what her husband needed is the thing that you in Wisconsin are trying to give. It is a delight to come to Wisconsin. I said here to you tonight what I have said in five hundred places in the United States, that your State University, that your trade schools, are doing more to administer to the need of all your people than any state in this Union. There are and there will be for years to come, I am afraid, hundreds of people who do not believe that the teachings who do not believe that the teaching of a boy to grow a bale and one half of cotton where formerly he grew a bale and to utilize that cotton and market it right has anything like the value of teaching him an ode from Horace. So I want to ask you tonight, what is your business? What is your relation to business?

I want to get this conception over,—you are not here simply to have a good time at this convention. It is your business to get down to living facts. What we are going to do for American business, what we are going to do in that little trade school back in Wisconsin, or in Tennessee, or in Texas, or in Arkansas, is to teach our people that taking what God has created and making it into things that man needs is the thing that counts most.

I went into one county in Wisconsin, where there were schools that did not have as many as seven students in any one of them and yet we are saying in this country that we are utilizing the money and equalizing it and giving people equal educational opportunity. You are doing it, possibly, better than most people do it.

I came here with one burning thought, is it possible for me to go to those people and say this: If you teach your trade right, if you get the conception what this country needs, if you will meet your obligations, you can overcome this depression that has come about as a result of these things I have tried to portray and you can rehabilitate this country.

That is what you are doing in this great school. I have been in practically every state in the Union in the last nine months and the states of Minnesota, of Wisconsin and of Colorado are in better shape than any of those others I have visited. Why is Wisconsin in better shape? It is because Cooley has this school, it is because over this State you had men who said: 'For this thing we call vocational education, we will levy a special tax and collect it and we won't let anybody have it for anything else.'

The farmer in this state tonight is the backbone of the state; he is saving it in a time when the factories are idle. Why? Because the State University, because your agricultural schools, because your leaders, see to it that that industry is developed. You have more floor space devoted to dairying at Madison than we have devoted to the four major arts at the University of Georgia. However, if you are going to amintain your own, if you are going to do your best in other states, wherever you may live, you have got to be alert and alive; *this thing of vocational education must be a passion in your soul.*

It was a great day in Georgia, when you sent us Chapman, and he became Vocational Director of our State, and I had a little old pittance of a school down on a street where nobody lives and nobody wanted to go, where they called us smithies, where they derided us and made fun of us, where they said we were not even fit to be called the scum of the earth, because we Southern folks for a large part, believed that anybody who worked with his hands was a sort of anathema, and I said to those 160 boys I started with down there: 'There is one thing good, sure and certain, if you boys come to this school you have got to wear overalls.'

Some of them said, 'We are not going to take these courses!' A millionaire's son came down there and he raised up and thought he could kick and get out of it: he brought his father down. I explained it to his father and he said, 'You are right, Mr. Sutton, if he stays here, put them on him,' and the one rule of that school was, no matter who came there or what they took, they were going to wear overalls one hour and a half anyhow.

When the Chevrolet plant, the Ford plant, the Pullman Shops went to Atlanta, they went because a technical high school was there. When great plants come into your city and pour millions into the payroll, they do not come because you are by a lake, they do not come because you are a distributing point, but they come because your Superintendent of Schools and because a Cooley had the vision to provide for men and women who could fill the places in which they were needed in those factories.

You have an obligation to business to train men better.

For the second thing, you have an obligation to retrain people. There was never a time when people had to be retrained as now. If we are going to save the country from communism, we have got to retrain folks. Train them so that they know a trade, retrain them to a job where they will be happy, make a wage, make a living and you will have no communism. Let people go along in this country without a job because the machine is used in industry and you will have communism. There is no use to sit here and 'cuss' the machine. The machine is here and more are coming. workers must be trained to meet changing conditions.

We had a great investigation by Congress in our city on the question of communism and there was a big fellow leading that communistic party whom I knew and I said to him, 'George, I understand you belong to this thing. What is the matter with you?' He said, 'I have just got to have work.' I said, 'Is that all the reason you joined it? What is your job?' 'I was a horseshoer, a blacksmith,'— and when that fellow commenced to lose out because there were no horses to shoe, he turned communistic.

If Atlanta had been as wise as she ought to have been, she would have gotten this fellow into sheet metal work as horseshoeing faded out and and there would be no communistic party in Atlanta tonight.

You have an obligation to train people, but you have also an obligation to retrain them. How many times—seven times seven? No!—seventy times seven! Retrain them as often as business changes.

Friends of vocational education, don't forget this one thought: we have got to be ahead of business. I say about my

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The development of an adequate program of vocational education requires the active cooperation of the agricultural, industrial, home making, and commercial interests. This is necessary because vocational education is a type of education which does not lend itself to the traditional forms of academic treatment.

We are committed to a Federal Board for Vocational Education made up of representatives of agriculture, industry, commerce, labor, and education, the members of which are recognized as leaders in the several fields they are chosen to represent. Such a board would assist in the formulation of policies, but would find its greatest service in securing the cooperation of the national organizations interested in the development of vocational education in their respective fields.

We affirm our interest in the work of your committee and with the above reservations pledge our active support to the proposal to provide additional federal funds to assist the states in the development of a program to meet modern educational needs.

A. V. A. COMMITTEE APPOINTED TO CONFER WITH NATIONAL ADVISORY COMMITTEE ON EDUCATION

1. George P. Hambrecht, (Chairman), State Director of Vocational Education, Madison, Wis.
2. L. H. Dennis, Deputy Superintendent of Public Instruction, State Department of Education, Harrisburg, Pa.
3. C. M. Miller, State Director of Vocational Education, Topeka, Kansas.
4. Ray Fife, State Supervisor of Agricultural Education, Columbus, Ohio.
5. O. D. Adams, State Director of Vocational Education, Salem, Ore.
6. J. B. Hobdy, State Director of Vocational Education, Montgomery, Ala.
7. H. L. Stanton, State Supervisor of Vocational Rehabilitation, Raleigh, N. C.
8. G. D. Whitney, Director, Department of Vocational Education, University of Pittsburgh, Pittsburgh, Pa.
9. Miss Jessie Harris, Head, Division of Home Economics, University of Tennessee, Knoxville, Tenn.
10. Paul S. Lomax, Professor of Commercial Education, University of the City of New York, New York City, N. Y.

AMERICAN VOCATIONAL ASSOCIATION
Milwaukee, Wisconsin,
December 11th, 1930.

PROGRESS REPORT OF LEGISLATIVE COMMITTEE, AMERICAN VOCATIONAL ASSOCIATION

Your Committee takes pleasure in reporting that satisfactory progress has been made toward the enactment of the Capper-Reed Bill, Senate 3969 and H. R. 10821.

Preparation of the Bill

The Bill in its present form, as most of you know, represents more than a year's work on the part of the Committee, under the very able and skillful leadership of Mr. L. H. Dennis of Pennsylvania. After the original draft of the Bill, it was submitted to the vocational leaders of the country four times. Each time the suggestions and criticisms made were reconciled as nearly as possible and the new draft resubmitted for further criticism and refinement. In other words, every attempt was made to draft a bill which would as nearly as possible satisfy the requirements of every section of the country and every group of workers.

Its Introduction

Finally, there came a time coincident with the organization of the Committee with its present personnel, when it was thought that the opportune time had come to introduce the bill into Congress. The time of its introduction was timed, perhaps, because of certain other national developments in the field of education. Accordingly, it was introduced into the House as H. R. 10821 on March 17th, 1930 and in the Senate as Senate 3969 on March 13th, 1930 and became known as the Capper-Reed Vocational Education Bill.

The Hearing

Arrangements were made for a hearing on the Bill before the House Committee on Education May 7th and 8th, 1930. Upon the request of the Chairman of the Committee on Education in the House, this hearing was made quite full and complete and an unusually large number of persons were invited to appear in behalf of the Bill. Persons representing both labor and employers' organizations appeared to testify for the Bill, persons representing civic organizations appeared in its behalf; also superintendents of schools and other school officials, including members of boards of education. Besides the rather unusually large number of persons actually appearing at the hearing in behalf of the Bill, a great many resolutions, letters and telegrams of endorsements were assembled and compiled into the printed report of the hearing.

The hearing got well under way during the first day and consumed the entire second day, lasting until late in the afternoon. Copies of the printed report of the hearing may be obtained by writing either to your own congressmen, to the Federal Board for Vocational Education, 1523 L Street, N. W., Washington, D. C., or to the Chairman of your Legislative Committee.

Digest of the Bill

The Bill provides, first, for the appropriation of a million dollars for the fiscal year ending June 30, 1931, and for each year thereafter for a period of three years a sum exceeding by one million dollars the sum appropriated for the preceding year; second, for allotment to the states on the basis of non-farm population; third, for a minimum of ten thousand dollars to each state; fourth, for payment of salaries of teachers, supervisors, directors and other members of the staff, including persons in apprenticeship and foreman training; fifth, that not less than one-fifth nor more than one-third of the total amount may be used for the training of persons in commercial pursuits; sixth, that one-third of the total amount may be used for the training of persons who are preparing to enter upon specific trade, industrial or technical pursuits; seventh, that the remainder, if expended, shall be used for trade extension in part time or evening schools or classes; eighth, all of the money provided under this Act may be used for the training of persons who have already entered upon employment in commercial, industrial and technical pursuits; ninth, for the appropriation of $100,000.00 annually to the Federal Board for Vocational Education for the administration of the Act.

Why the Bill Should Pass

Following are some of the reasons why we believe that this Bill should be entered at the earliest possible time:

1. The present federal fund allotted to the states for the aid of trade and industrial education, under the Smith-Hughes Act is used to within 3.3 per cent of the total annual grant. This financial margin of safety is necessary to avoid deficits.

2. The 1929 enrollment in federally aided trade and industrial classes represented training in 225 occupations and included:

65,000 youths over 14, in full-time trade schools, preparing to enter the skilled trades..	11.6%
367,000 working youths over 14, in part-time schools, learning while they earn a living.....	65.2%
131,000 working adults, in evening schools, training to improve themselves in their jobs.....	23.2%
563,000	100.0%

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PRESIDENTS PAST AND PRESENT

The above picture represents the incoming and outgoing presidents of the National Association of State Directors and of the American Vocational Association. In this case the "means" equals the "extremes" or "one is to two as four is to three". Reading from left to right, Mr. George P. Hambrecht, State Director of Vocational Education in Wisconsin passes the gavel of the State Directors Association over to Mr. Wesley A. O'Leary, Deputy State Commissioner of Education for New Jersey while Mr. C. M. Miller, State Director of Vocational Education in Kansas receives the baton of leadership of the American Vocational Association from Mr. Paul W. Chapman, State Director for Vocational Education in Georgia.

VOCATIONAL EDUCATION GROWN UP

On the whole Vocational Education in the United States is quite a lusty, sizeable child. He grows bigger every day but - - - -

Styles in football have changed. A few years ago, my gray hairs tell me, "beef, brawn, and muscle", through the center, and off tackle, over the top and pile 'em up meant "a heap" but - - - -

Today we have the open game,—plenty of running,—heads up for *eyes to see* and—someplace to record, transcribe and translate to action what is there, but - - - -

The whale is big and he spouts an awful lot—he is good for his blubber, but—whoever heard of there being a whale of a difference in where the weight is—above or below the neck? but - - - -

Vocational Education is full grown and needs "weight" no longer to kick goal—*Head "gear" is the order of the day!*

SCHOOL FOR CUSTODIANS AND CARETAKERS OF SCHOOL BUILDINGS OFFERED BY PURDUE UNIVERSITY AND INDIANA STATE BOARD FOR VOCATIONAL EDUCATION

"How to get the most heat from the coal pile" was the subject of the first lecture in the first annual school for custodians and caretakers of school buildings undertaken in a summer conference last summer under the directiou of the Department of Education cooperating with the Engineering Extension Department of Purdue University and the State Board for Vocational Education of Indiana. One hundred and seventy-five men responded to the call for the first conference. The enthusiasm of the group ran high during the entire four day session, this interest being climaxed by a unanimous vote for a similar conference during the summer of 1931.

Plans are now under way for the organization of a three day school to be held during the week of June 16th at Purdue.

Out of more than two hundred distinct jobs reported by these men last year for which they are responsible, a program will be built insuring practical instruction in at least the major activities.

Opportunity will be given this year also for the display of equipment and practical demonstrations by commercial firms.

An announcement of the program will be forthcoming in a short time. Information may be secured by writing to the Director of the Summer Session, Purdue University.

You Should Be a Life Member

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tions and assist to work out some workable solution, they will have contributed immeasurably not only to their own day and generation, but to those who are to come after us as well.

A city woman will be interested and perhaps surprised to learn that the transportation charges of the farmer enters largely into the total amount of her grocery bills. That out of the high price she pays for items of food, a pitifully small price eventually goes back to the producer. She does not realize that cooperative marketing holds any benefit for her, and yet the late Henry Wallace often said "Cooperative marketing is applied Christianity for it eventually benefits both producer and consumer". If the city woman is the wife of a manufacturer she is vitally interested in the figures that point out what the farmer buys.

Agriculture is a determining factor in our economic welfare.

It normally exerts a purchasing power for nearly ten billion dollars' worth of goods and services of other groups annually.

It purchases annually about a tenth of the value of the products of our manufacturing industries.

It supplies materials upon which depend industries giving employment to nearly half of our industrial workers.

It pays indirectly about two and a half billions in wages of urban workers.

It supplies about an eighth of the total tonnage of freight carried by our railroads.

Its products constitute nearly half of the value of our exports.

It pays in taxes one fifth of the total cost of government.

The capital invested in it in 1919 more than equalled that invested in our manufacturing industries, mines and railroads combined.

It represents about a fifth of our national wealth, and normally contributes about a sixth of the national income.

Since it supplies not only the food for our industrial workers, but about a third of the materials of our industries and a market for a large part of their products, it forms the basis of our industrial prosperity.

Since, also, the farm population forms about thirty per cent of our total population and constitutes a reservoir from which must be drawn a large part of our future citizens, the standards of living and the social welfare of this group cannot but have an important effect upon the racial quality of our people.

If the farmer's buying power continues to decline, there will be idle factories, cold chimneys and armies of unemployed men as a result. The farm woman brings to the situation pa-

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Yet there are approximately 500 trades and occupations for which training of less than college grade is needed, and each year the United States has about 4,000,000 such young wage earners and approximately 25,000,000 adult wage earners. Many of these occupations, in addition to those already being served, and many more of these wage earners could be reached and served by the vocational education program if funds were available.

3. That the present federal cooperation with the states under the Smith-Hughes Act of 1917 stimulated the states to promote trade and industrial education and training is shown by the fact that every state promptly accepted the provisions of the act, with few exceptions the states and local communities use all federal funds allotted, and now spend for the same purposes approximately $4.00 to every $1.00 of federal aid.

4. Further federal cooperation with the states in trade and industrial and commercial education is needed to further stimulate and aid the states in solving the pressing and momentous training problems incident to:

a. The continuous vocational retraining of wage earners, temporarily unemployed, unsteadily employed, or likely to be, because of increasing mechanization, progress in business and industrial efficiency and changing economic demands, into operators of the newer machines and processes or into new and expanding occupations, similar to the occupations in which they are experienced.

b. The Continuous vocational improvement of wage earners, temporarily unemployed, unsteadily employed, or likely to be, because of their lack of the hand and technical efficiency increasingly demanded of the occupations in which they are attempting to earn a livelihood.

c. The vocational training of older tradesmen into the lighter and more skilled branches of their respective crafts in which their past experiences will be continuing assets and declining strength will be no bar.

d. The training of the nation's increasing number of apprentices in the skilled trades, and learners in other occupations, to a high degree of all-around hand and technical efficiency in their chosen occupations as insurance against future unemployment and loss of wages, and as assurance of an adequate supply of thoroughly skilled workers for the nation.

5. With the growing electrical, chemical, mechanical, and other scientific technical control of trade, industrial and commercial processes and procedures there is a growing demand for the training of young people as, what have come to be called, junior vocational technicians, and for entrance into which jobs college training is not requisite.

6. Further federal cooperation with the states is needed to meet the increasing demand for the training of trade, industrial and commercial foremen, forewomen, and other supervisors as the leaders and teachers of the millions of wage earners who because of their highly specialized jobs, must receive the necessary training for them mainly on their daily jobs from their supervisors.

7. Federal cooperation with the states in commercial education, not aided under the Smith-Hughes Act, is needed to stimulate the states to bring the training for commercial pursuits up to the high standards of general and specialized efficiency demanded of office, retail and other commercial workers by modern business organizations.

8. Additional funds are needed, and needed badly, by both the Federal Board for Vocational Education and by the states, and jointly, for the stimulation of research and the collecting of research data vital to the efficient functioning of vocational education including the determination of the exact physical and psychological characteristics that individuals must possess in order to profitably receive training for specific occupations, the development of efficient tests to this end, the accurate and continuous determination of the training needs of the people of the states, the continuous discovery of new occupational fields needing training, the continuous analysis of occupations and upon them the building and rebuilding of courses of study to meet changing occupational requirements, the accurate and continuous evaluation of the results of vocational training; and the dissemination of such facts.

9. Finally, we believe that the further development of the program of vocational education on a national basis is one of the potent factors essential to the permanent adjustment of the present wide-spread unemployment situation. We do not mean to infer that vocational education is the answer to the unemployment situation but we do not believe the unemployment situation can be permanently and satisfactorily adjusted without Vocational Education on a national basis. Based on the experience of the years we do not believe that such a program can be satisfactorily developed except by the federal government taking its share of the responsibility by making funds available and by maintaining a governmental agency representative of the industries of the country for the promotion of this work.

Prospects

After having spent three days in Washington recently, conferring with leaders in both Houses of Congress, I am convinced that the prospects for securing this legislation are good. I was unable to discover any organized effort which threatened the success of this measure. I did discover much sentiment in favor of it. It is my conviction that the greatest difficulty we shall encounter is the shortness of time from now until Congress adjourns. To secure the enactment of this important measure will require concerted action on the part of our entire membership, the task is a difficult one but because it is difficult it is a challenge. Performing a difficult task brings a greater measure of satisfaction than the performance of an easy task.

The Next Step

Arrangements are being made for conducting a hearing before the Senate Committee on Education and Labor on Senate 3969 early in January. To my mind all other roads are closed to us except the one straight ahead. We shall not accept defeat until the last gavel falls adjourning Congress.

Recommendations

As Chairman of your Legislative Committee it is my recommendation that you resolve to go forward with this program with all the energy and enthusiasm that this organization can command. To accomplish the tasks that lie ahead of us it will be necessary that we have the finest of cooperation among the several services represented in our organization—it will be necessary that we have even closer cohesion among the several groups than we have ever had,—it will be necessary that we focus our energies as accurately as possible on the changing situations as they develop.

I recommend, therefore, that you choose your leadership wisely and carefully, and having chosen, follow. Give your leaders your undivided and enthusiastic support in the prosecution of this, the biggest task the American Vocational Association has before it.

Respectfully submitted and signed,
LEGISLATIVE COMMITTEE,
C. M. Miller, *Chairman.*

REPORT OF RESOLUTIONS COMMITTEE AMERICAN VOCATIONAL ASSOCIATION CONVENTION MILWAUKEE, WISCONSIN

December 10-13, 1930

RESOLUTION No. 1

WHEREAS, The Legislative Committee of the American Vocational Association reports satisfactory progress in its efforts to secure the enactment of the Capper-Reed bill, S. 3969 and H. R. 10821 and,

WHEREAS, We firmly believe that the further development of the program of Vocational Education on a nation-wide basis is one of the potent factors essential to the permanent adjustment of the present widespread unemployment situation, and

WHEREAS, We believe this legislation to be of first importance in the further development of a National program of vocational education, Be it

RESOLVED, That the American Vocational Association endorse the work of its Legislative Committee and urge it to use every legitimate means to secure the enactment of the Capper-Reed bill, and Be it

FURTHER RESOLVED, That the Association pledge its membership to aggressive and undivided support of the Committee in its further activities to secure favorable action on the measure.

RESOLUTION No. 2

WHEREAS, The George Washington Bi-centennial Commission created by the Congress of the United States has extended to the American Vocational Association an invitation to co-operate in the celebration of the Two Hundredth Anniversary of the birth of George Washington, to take place in 1931, Be it

RESOLVED, That the Association hereby endorse the proposal of the Commission and encourage its members to lend every assistance to a proper observance of the occasion.

RESOLUTION No. 3

WHEREAS, It has come to the knowledge of your committee that during the past year, while Milwaukee was making preparations for the entertainment of this convention, our Association has lost four of its oldest Milwaukee members—

William C. Sieker, Assistant Director and Principal of the Milwaukee Vocational School, died on December 1, 1929. Mr. Sieker for nineteen years had been a member of this national organization and its antecedent, and during this period of time never missed a year in attendance on a national conference.

In April, 1930, Mr. Christ Scholtka, a member of the local Board of Vocational Education and for many years a member of this organization and the old National Society for Vocational Education, passed away. Mr. Scholtka always attended the national meetings of the association and was one of its enthusiastic supporters.

On July 28, 1930, Mr. Robert H. Rodgers, the head of the Department of Teacher Training and Research of the Milwaukee Vocational School, died. Mr. Rodgers was a figure of national importance because of his contributions in the field of vocational Education. He also had been, since the inception of the movement, a member of the old National Society and of the American Vocational Association.

Mr. J. D. Hickey, for nineteen years a member of the local board of Vocational Education, its president for fourteen years, a member of the National Society and of the American Vocational Association, passed away at his home on October 11, 1930. Mr. Hickey was a loyal member of the association during this entire period, and was widely known and admired for his sterling support of our movement.

In view of the passing of these leaders from the field of vocational education your committee on resolutions recommends that the association express its sense of loss and high esteem of these, our fellow craftsmen. It further recommends that the Association extend its sympathy to their friends and associates and to the members of their respective families.

RESOLUTION No. 4

WHEREAS, The National Association of State Superintendents and Commissioners of Education have held their annual meeting in Milwaukee, this week, and

WHEREAS, Many members of that organization have remained in the city to attend sessions of the American Vocational Association, Be it resolved,

1. That we express our appreciation of their presence and the interest which they continue to show in vocational education, as evidenced by their participation in our meetings.

2. That we request their organization to meet with us at the same time and place in 1931 and in succeeding years.

RESOLUTION No. 5

WHEREAS, The fifth annual convention of the American Vocational Association being held in Milwaukee at this time is proving one of the most pleasant and profitable gatherings in the history of the Association, and

WHEREAS, The success of the convention, and the entertainment of its members have been due, in no small part, to the efforts of Milwaukee and cooperating cities of the State, Be it

RESOLVED, That we express our sincere appreciation of the many courtesies and services which have been extended the Association by the several individuals and organizations contributing to the success of the meeting, including:—

1. Dr. R. L. Cooley, Director of the Milwaukee Vocational School, Mr. George P. Hambrecht, Director of Vocational Education of the State of Wisconsin, and members of their official staffs.

2. The commercial exhibitors whose generous cooperation and support continue to aid in making possible the holding of these conventions.

3. The management of the Schroeder Hotel for the many facilities and courtesies extended the Association and individual members.

4. The local press for generous cooperation in providing reporters to cover the activities of the convention and in giving publicity to its proceedings.

5. The local Board of Vocational Education, the Board of Education of the City of Milwaukee for the use of buildings and valuable assistance rendered through their official staffs in promoting the convention.

6. The Wisconsin Association of Local Directors of Vocational Education for leadership in directing plans well thought out and executed.

7. The Association of Commerce for generous support of local arrangements.

RESOLUTION No. 6

RESOLVED, That the American Vocational Association felicitates the rehabilitation group upon the passage by Congress of the act continuing the appropriation of $1,000,000 for rehabilitation work for an additional period of three years, and that it commends the legislative committee for its efforts in furthering the bill, And further

RESOLVED, That the original goal of a longer period and larger appropriations be kept in mind, and efforts to secure passage of such new legislation at the proper time be endorsed.

Respectfully submitted,
R. W. Heim, Delaware
Mrs. Mildred W. Wood, Arizona
O. D. Adams, Oregon
Oscar Sullivan, Minnesota
W. W. Winkel, Wisconsin
W. F. Patterson, Wisconsin
J. B. Hobdy, Alabama, Chairman.

Before calling for the report of the Committee on Nominations, Mr. Chapman made some constructive recommendations concerning the future work of the A. V. A., which may be summarized as follows:

1. Provision should be made as rapidly as possible for maintaining the services of a full-time official, who would discharge most of the duties now performed by the president and would extend the scope of the services of the office of secretary. This recommendation was in harmony with that made by Secretary Smith to the Executive Committee at Philadelphia and New Orleans and with the action taken by the Executive Committee at Milwaukee.

2. A rather broad, comprehensive study or survey of vocational education in the United States should be made. The president of the A. V. A. should be authorized to appoint a committee with power to make an effort to secure the necessary funds to make such a study or survey possible. This recommendation had been made to the Executive Committee by Mr. Chapman earlier in the week and the Committee had approved the proposal.

3. The A. V. A. should print the worth-while material coming out of the section meetings of the annual convention.

4. The standing committee for each section of the A. V. A. should bring in each year a very brief, concise, definite report, setting forth the trend in that particular phase of vocational education; not a long document, but a report that might be written on one sheet of paper.

Another responsibility of each standing committee should be that of making studies and recommendations with reference to standards of attainment in its field of vocational education. The report of the committee on Standards of Attainment in Industrial Arts Teaching is a commendable example of the kind of report recommended.

The final report was that of the committee on nominations. The report of the committee, which was as follows, was approved:

REPORT OF THE COMMITTEE ON NOMINATIONS

President, C. M. Miller, State Director of Vocational Education, Topeka, Kansas.

Treasurer, Chas. W. Sylvester, Director of Vocational Education, Baltimore, Maryland.

Vice President for Agriculture, Ray Fife, State Supervisor of Agricultural Education, Columbus, Ohio.

Vice President for Trade and Industry, Irvin S. Noall, State Supervisor of Trade and Industrial Education, Salt Lake City, Utah.

Vice President for Home Economics Education, Miss Margaret M. Edwards, Head of Department of Home Economics, Alabama College, Montevallo, Alabama. (For two years, the unexpired term of Beulah I. Coon, resigned)

Committee on Nominations:—H. C. Fetterolf, Pa., J. V. Ankeney, W. Va., Elizabeth Amery, Md., Druzilla Kent, Ark., Thomas H. Quigley, Ga., Geo. K. Wells, Ind., Oakley Furney, New York, Chairman, J. C. Carpenter, Cal., A. H. Abbott, Okla., W. F. Faulkes, Wis., Earl L. Bedell, Mich., Ben Knauss, Ill. (Not present and not voting by proxy)

OVER the TOP

we
now have

10,333

MEMBERS!

TEACHERS!
WHAT ARE YOU DOING?
TELL IT!

1. Write a 200 word story about it.
2. Send the story to the News Bulletin Editor.
3. For the five best articles received we will pay $5.00 each.
4. They must be about something you have done or are now doing. They must reach us by March 15.
5. Address News Bulletin Editor, Room 225, State House, Indianapolis, Indiana.

The Question Box

In the last issue of the News Bulletin we started a Question Box at the head of each division. The response was good. We are continuing this month with this additional offer. We will pay $5.00 for the best answer received to any one of these questions. Your reply should not exceed 100 words. Sign your name and give your position and your address. Send your reply to News Bulletin Editor, Room 225 State House, Indianapolis, Indiana, by Mar. 15th.

Do you have a problem pertaining to your job as vocational teacher that you want answered? Send it in and if we use it you will get a dollar.

A Southern K-Night

A Southern Gentleman, Paul Chapman, conducted the affairs of the Convention with typical southern style and ease. That mellow southern drawl of his, and that smile when it finally breaks through are simply captivating in their effect on any audience. We are sorry his year is over and for his "Good Works" we take pleasure in reviving an "Old Southern Custom," and knight him - - - "Colonel Chapman."

PICTURES
WE WANT PICTURES!
WE WILL PAY!

Pictures of class activities, classrooms, shops, buildings, projects (either class or individual) will be used in the News Bulletin if you will send them in.

They should be clear, sharp and on glossy finish. Tell in 50 words what they are about.

We will pay one dollar each for the five sent in which we consider most appropriate for our use.

American Vocational Association Inc.

Sixth Annual Convention
New York City
December 9, 10, 11, 12, 1931
Headquarters—Hotel Pennsylvania

GENERAL SESSIONS

Wednesday evening, December 9
1. One speaker.
2. Get together, get acquainted.
3. Dancing.

Thursday evening, December 10
1. Banquet and dance.

Friday afternoon, December 11
1. Business session.
2. "THE SHIP" prize awards. (The SHIP will not put on an entertainment at this time, but will cooperate with New York and New York City in putting on the Wednesday and Thursday evening programs).

Friday evening, December 11
1. Two or three speakers representing
   a. Agriculture.
   b. Labor.
   c. Commerce.

SECTION MEETINGS

Thursday forenoon and afternoon
1. Agriculture.
2. Home Economics.
3. Industry.
4. Commerce.

The programs for these four general section meetings will be arranged for by Dr. L. A. Wilson with the cooperation of the respective vice presidents of the A. V. A.,—namely Ray Fife, Margaret Edwards, Wesley A. O'Leary and Regina Groves.

The general theme of these *eight* meetings will be "Social and economic trends in America." The speakers will be outstanding representatives actively engaged in the vocations in these respective fields.

Friday forenoon and Saturday forenoon
Section and sub-section meetings.
1. Agriculture.
2. Trade and Industry.
3. Home Economics.
4. Commerce.
5. Civilian Rehabilitation.
6. Vocational Guidance.
7. Part-time.

Each of the vice presidents will be responsible for the program for their respective sections and sub-sections for both Friday forenoon and Saturday forenoon.

The theme of these section and subsection meetings will be "What is vocational education doing to prepare wage earners to adjust themselves effectively to the social and economic trends in America as portrayed by the speakers in the general section meetings for Thursday?"

STATE DIRECTORS ANNUAL CONFERENCE

The Annual Conference of the National Association of State Directors of Vocational Education was held just prior to the A. V. A. convention in Milwaukee in December.

In the business session of the Association at the close of its regular session, the retiring president, George P. Hambrecht, State Director for Vocational Education in Wisconsin, passed the gavel over to Wesley A. O'Leary, Deputy State Commissioner of Education, New Jersey, the newly elected president.

Among the topics discussed in the Association meetings were those dealing with problems of legislation, promotion, finance and research.

RESEARCH ACTIVITIES AND RESPONSIBILITIES

A Discussion at the Annual Conference of State Directors of Vocational Education, Milwaukee, Wis.

By Dr. Z. M. Smith

The problem agreed upon for research study must be of such character as to merit the time and effort of the agents of the federal board.

The type of studies contemplated require the direction and supervision of a responsible, capable, interested agency such as the federal board.

These studies should be more fundamental and comprehensive than mere fact-finding regarding existing situations. This phase of research may be important and necessary in some cases, but the research contemplated by the state directors will go much farther than this.

Factual data on existing situations should be secured when necessary. These data should be analyzed, interpreted and evaluated to obtain a basis for outlining principles and procedures for securing improvement. To do this requires an agency equipped with personnel, facilities and funds, that can be depended upon for an extended period of time.

But the studies contemplated will go farther than securing factual data and setting up proposed programs of action for improvement. Situations should be created or set up with provisions for control factors so that comparative data can be secured on both existing situations and situations that ought to exist, but which left to natural evolution will not materialize.

This type of research can be done only when directed and supervised by an agency that is of such character as will insure stability, dependability, continuity, and sound financing of the research program. This kind of direction and supervision can be supplied by the professional services of the federal board for vocational education This is the available agency that is better fitted for this constructive research than any other existing agency. The professional services of the federal board for vocational education should be depended upon for the educational leadership and the educational statesmanship that are basic to the successful prosecution of the contemplated program of research.

The federal board must have the effective cooperation of each state, of industry of every type, and of special foundations in providing situations, workers, and funds necessary for the type of research proposed.

East is East
West is West
Soon the twain shall meet

With the Milwaukee Convention behind us we begin immediately to look forward to the end of another year and to anticipate the 1931 meeting. For the first time since that rather doleful session of the old National Society in Buffalo in 1923 we go back to New York state, this time to New York City. And what a difference! If Buffalo could entertain us now she would never know it to be the same convention that almost died on her hands seven years ago. It is to be hoped that representatives of that city will come down to New York in goodly numbers so that we may demonstrate to them that 1923 really was an off year. However if we are to do that effectively it means that now is not too soon to begin to put a little by in your old sock so that when December next rolls around there will not be any question of the wherewithall to make the trip.

Life Members

I know a woman who once said, "there are two things certain. When I grow up I'll not marry a farmer and I'll not marry a school teacher"—Poor thing, when she did marry she got both. What she needed was not more guidance but guidance of a higher quality. There seems to be one or two redeeming graces about the whole thing, however. She says, "he is my life member and I can depend upon him". Vocational Education needs more Life Members so she too can rest secure and feel safe and peaceful in the Educational Family.

Pop the question and let the silver ring!

REPORT OF THE COMMITTEE ON "STANDARDS OF ATTAINMENT IN INDUSTRIAL-ARTS TEACHING"

For the past three years the Executive Committee of the American Vocational Association has appropriated funds with which to meet part of the expenses of the investigation conducted by a committee of the Industrial-Arts Section, which has been studying "Standards of Attainment in Industrial-Arts Teaching." In its initial stages this study has been confined to the junior high school period, and has aimed to formulate in definite terms the "operations which a boy should be able to perform at the close of the junior high school period," and the requisite "units of related knowledge."

A preliminary report, covering the subjects of woodworking, household mechanics, electrical construction, sheet-metal work, printing, and automechanics, was presented at the New Orleans convention, in December, 1929, and later printed in pamphlet form and widely distributed.

A progress report dealing with the problems of "time allotments" was presented by the Committee at the Milwaukee convention, in December, 1930, and provoked a lively discussion, and resulted in a formal request of the Executive Committee that this report also be made available in pamphlet form. However, the discussion at Milwaukee brought out a number of constructive suggestions which, in the judgment of those present, make it desirable that the material be revised before publication. Accordingly, the Executive Committee has been requested to delay publication until the suggested changes can be carried out.

The Executive Committee has approved this request, and has authorized the publication of 5000 copies of the report as soon as it is ready, to sell for a nominal sum. Further announcements may be expected at an early date.

The members of the Committee, chosen to represent widely separated sections of the country, are: E. E. Ericson, State Teachers College, Santa Barbara, California, *Chairman*; C. F. Bauder, Board of Education, Philadelphia; W. T. Bawden, Peoria, Illinois; C. A. Bowman, Stout Institute, Menomonie, Wisconsin; M. M. Proffitt, U. S. Office of Education, Washington, D. C.; W. E. Roberts, Board of Education, Cleveland, Ohio; R. W. Selvidge, University of Missouri, Columbia, Missouri.—*W. T. Bawden.*

"We would hate to have to entertain the Convention next year and live up to the Wisconsin standard" is quite a compliment if we know much. Li'le Ole N'York will certainly have to start early and work late.

LIFE MEMBERS

Life Memberships Presented by Wisconsin to the American Vocational Association
December 12, 1930

CITY	RECIPIENT	DONOR
Appleton	Herb Heilig, Director Vocational School	Day and Evening School Faculty
	Carlton Saecker, President Board of Vocational Education	Local Board of Vocational Education
Beloit	Beloit Vocational School, held by A. G. McCreary, Director	Local Board of Vocational Education
Cudahy	For Michael F. Cudahy, in honor of his father, Patrick Cudahy	Cudahy Bros. Work Council
	Christian Becker, President Local Board of Vocational Education	Local Board of Vocational Education
Fond du Lac	Fond du Lac Vocational School	Local Board of Voc. Ed.
	O. J. Dorr, Director Vocational School	Faculty and Students of Vocational School
Green Bay	Emma Toule, Coordinator Vocational School	Day and Evening School Faculty
	E. E. Gunn, Jr., State Supervisor Voc. Trade and Industry, and Asst. State Director Vocational Education	Citizens of Green Bay
	Arthur Bouffard, Itinerant Instructor, Pulp and Paper	Some paper mills in Green Bay, Appleton, Menasha
	Harry O. Eiken, Director Vocational School	Local Board of Vocational Education
	Louis Sogey, Printing Instructor Vocational School	Green Bay Trades Council
Janesville	Janesville Vocational School, G. J. Ehart, Director	Local Board of Vocational Education
Kenosha	E. F. Randall, Director Vocational School	Teachers of Voc. School
	Roger Kimball, President, Allen-A Company	Contributed by himself
	Jessel S. Whyte, Vice-President The MacWhyte Company and Member of the State Board of Vocational Education	George S. Whyte, Pres., The MacWhyte Co.
	Ralph Kingsley, President, Kenosha News Publishing Co.	Contributed by himself
LaCrosse	John B. Coleman, Director, Vocational School	Board of Voc. Ed. and Faculty of Voc. School
Madison	Local Board of Vocational Education (held by T. F. Murray, President)	Local Board of Vocational Education
	J. H. Brown, Assistant Supervisor, Vocational Rehabilitation	Wisconsin State Council of Carpenters
Manitowoc	Local Board of Vocational Education (held by O. H. Senglaub, President)	Local Board of Vocational Education
Milwaukee	A. J. Lindemann, President, Board of Vocational Education	Staff of the Milwaukee Vocational School
	R. L. Cooley, Director Vocational School	Staff of the Milwaukee Vocational School
	Milton C. Potter, City Superintendent of Schools	Staff of the Milwaukee Vocational School
	William F. Rasche, Principal and Assistant Director Vocational School	Contributed by himself
	Henry Ohl, Jr., President, Wisconsin State Fed. of Labor	Contributed by himself
	Frank A. Maas, Faculty Counsellor, Vocational School	Contributed by himself
	G. J. DeGelleke, Designer of the Milwaukee Voc. School	Contributed by himself
Milwaukee *Continued*	Harold S. Falk, Member of Local Board of Voc. Edu.	Contributed by himself
	William George Bruce, Pres., Bruce Publishing Company	Contributed by himself
Neenah	Neenah Paper Company	Neenah Paper Company
	Bergstrom Paper Company	Bergstrom Paper Co.
	Frank Shattuck, Vice-President Kimberly-Clark Corporation, in charge of Personnel	Kimberly-Clark Corp.
	Frank J. Sensenbrenner, President Kimberly-Clark Corp.	Contributed by himself
Racine	T. S. Rees, Dir. Voc. School	Faculty of Voc. School
	William Illingsworth, Supervisor Trade & Industry, Vocational School	Contributed by himself
	Miss Elizabeth R. Fratt, Supervisor, Home Economics, Vocational School	Contributed by herself
	Miss Marion V. Fels, Supervisor Com'l. Dept. Voc. School	Contributed by herself
	Miss Dora M. Rude, Supervisor Adult Home Making, Vocational School	Contributed by herself
	H. G. Shufelt, Supervisor Manual Arts, Vocational School	Contributed by himself
	George Strombeck, Supervisor Evening Trade and Industry	Contributed by himself
Sheboygan	L. R. Evans, Director Vocational School	Faculty of Vocational School
	Sheboygan Vocational School	Social Fund of Voc. School
Two Rivers	A. A Kruschke, Director of Vocational School	Local Board of Vocational Education
Watertown	Watertown Vocational School (held by B. C. Trueblood, Dir.)	Local Board of Voc. Ed.
Wausau	Harold G. Noyes, Coordinator for Adult Education in Trade and Industry	Clark Everest and Advisory Committee in the Pulp & Paper Industries
West Allis	Harry P. Hurley, Director Vocational School	West Allis Civic Alliance
	Board of Vocational Education (held by Samuel Moore, Pres.)	Board of Vocational Education
	Board of Vocational Education (held by F. L. Aubrey, Secy.)	Board of Vocational Education
Wisconsin Rapids	Board of Vocational Education (held by W. A. Sprise, Dir.)	Board of Vocational Education
State at Large	George P. Hambrecht, State Director Vocational Edu.	Wisconsin Vocational Association
	John Callahan, State Superintendent of Public Instruction	Wisconsin Directors' Association
	E. W. Schultz, President, State Board of Vocational Edu.	Members of State Board of Vocational Edu.
	Miss Margaret Johnston, State Supervisor of Home Eco. Ed.	Wisconsin Home Economics Teachers
	Mrs. Jennie M. Turner, Asst. in Teacher-Training, State Board of Vocational Education	Teachers of English and Social Science in Wisconsin Voc. Schools
	L. M. Sasman, State Supervisor Vocational Agriculture	Wisconsin Vocational Agriculture Teachers
	B. E. Nelson, President, The Stout Institute	Faculty and Staff of the Stout Institute
	William F. Faulkes, State Supervisor Voc. Rehabilitation	Members of his staff and a group of local directors of Voc. Edu.
	Wisconsin Vocational Assn.	Wisconsin Voc. Assn.
	Walter J. Kohler, Governor, State of Wisconsin	Contributed by himself

Pictures of these Life Members will be run in the May issue of the News Bulletin. They do nor appear in this issue due to the fact that we have been unable to secure all of them. *Editor*

THE BADGER DRIVE *for* LIFE MEMBERS

OBJECTIVES OF THE COMMITTEE ON LIFE MEMBERSHIPS

This Committee was appointed by Mr. George P. Hambrecht, State Director of Vocational Education

1. To sell the idea of Life Memberships to people interested in Vocational Education in the State of Wisconsin.
2. To attempt to obtain at least fifty Life Memberships.

PLAN OF ORGANIZATION

It was felt that there were four distinct groups of interested people to be reached.

1. Local Boards of Vocational Education.
2. Faculties of Local Schools.
3. Business and Industrial leaders.
4. Service clubs.

Placed in charge of and given complete responsibility for these respective groups were:

Mr. O. J. Dorr, Director of Vocational Education, Fond du Lac Wis., for No. 1.

Mr. L. R. Evans, Director of Vocational Education, Sheboygan, Wisconsin for No. 2.

Mr. Frank Bruce, Publisher, The Bruce Publishing Company for No. 3.

Mr. A. R. Graham, Director of Vocational Education, Madison, Wisconsin for No. 4.

Mr. Herb Heilig, Director of Vocational Education, Appleton, was Chairman of this Committee.

The chief use to be made of the income from the endowment fund provided through life membership fees is the financing of research in vocational education. The results of one study have been bpulished in bulletin form. Two other studies have been completed and are now ready for publication.

SPECIFIC ACTIVITIES OF MEMBERS OF THE COMMITTEE

1. Mr. Dorr wrote a letter to each local Board of Vocational Education in the state. He wrote this letter to a key member of the Board, asking him to present the problem to the local Board to in some way assume responsibility for the payment of a Life Membership to be granted to some person to be honored or in the name of the school.

The response to Mr. Dorr's activity, with its follow-up was gratifying.

2. Mr. L. R. Evans selected a key person on the faculty of the larger Vocational schools in the state and through him or her worked to get the faculties to subscribe to plans to finance a Life Membership for one of their number, the Director, or a member of the Board of Vocational Education. Mr. Evans found the response above that which he anticipated.

3. Mr. Frank Bruce asked local Directors to present the names of "key men" in their respective communities. These "key men" were sent three letters; one, sent by the President of the American Vocational Association; one, sent by Mr. R. L. Cooley as General Chairman of the Convention Committee; and one, sent by Mr. William George Bruce. These letters were effective. Mr. Bruce sacrificed time, energy, and money. It was his enthusiasm and optimism which carcied the committee through to the attainment of its goal.

The actual solicitation of funds for Life Memberships was left in the hands of the local Directors, who called upon these "key men" in their respective communities and signed up the Life Memberships.

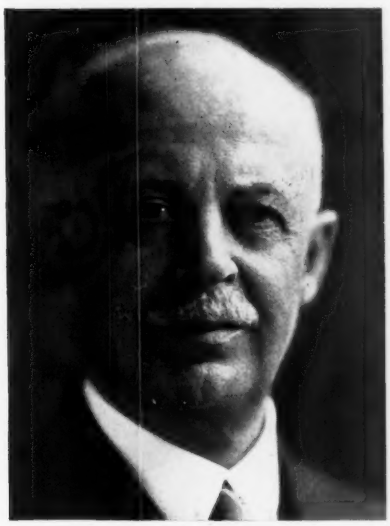
4. Mr. A. R. Graham solicited Life Memberships for Local Directors who were active and effective members of local service clubs.

ACHIEVEMENT OF THE COMMITTEE

1. We believe that Vocational Education has been sold and resold through the efforts of all those who participated in the campaign to raise Life Memberships. Much of this was in the hands of the local Directors.

2. The Committee secured 60 Life Memberships for the American Vocational Association.

3. The Committee feels that it has revealed the possibilities to the Executive Committee for the raising of one thousand Life Memberships within a short period of time. We feel that this goal could be reached within the calendar year of 1931.



Dr. Robert L. Cooley, director of the Milwaukee Vocational School. This internationally known school with its seven floors of workshops, studyrooms, and laboratories, covering fifteen and two-fifths acres of floor space, with an enrollment of more than 20,000 last year, has been under the directorship of Dr. Cooley during the entire nineteen years of its life. Boys and girls above the eighth grade and not in any other school, who are working on permits, must attend the vocational school one-half time until they become seventeen years of age, and must attend eight hours a week until the close of the school year in which they are 18. Night classes are conducted for adults. Under the skillful guidance of Dr. Cooley this school has the plasticity that allows it to adjust its educational opportunities to every individual need.

George P. Hambrecht, state director of vocational education for Wisconsin. As a member of the state legislature several years ago, he pioneered in securing legislation that has made Wisconsin unique in its part-time and evening schools for young and adult wage-earners. He is one of Wisconsin's educational leaders whose influence has played a large part in inducing the state to shoulder its educational obligation to those who leave school and go into employment early in life. His professional services as teacher and director have contributed in no small degree to Wisconsin's achievements in vocational education. The success of the Wisconsin Drive for Life Members is a fine tribute to Mr. Hambrecht's leadership.

PAUL W. CHAPMAN

Paul W. Chapman, State Director for Vocational Education, Georgia, and past president of the American Vocational Association needs no introduction to readers of the News Bulletin. Mr. Chapman is a man of words and deeds. During his term of office as president of the A. V. A. he repeatedly emphasized the fact that vocational leaders throughout the country should become Life Members of the Association. As strength to his argument he intrenched himself behind a Life Membership of his own and as is evidenced by the Wisconsin record the inspiration of his leadership and the weight of his arguments proved effective.

Mr. Chapman has come up from the ranks. He was a teacher of vocational agriculture in Missouri before he became State Supervisor of Vocational Agriculture in Georgia. Due to his leadership "things happened" in Georgia. The state program grew in

Continued on Page 20

MEMORIAL ENDOWMENT MEMBERSHIP

An individual, association or group may memorialize a deceased friend by purchasing a memorial endowment membership for one hundred dollars or more on either of the payment plans for a life membership.

MRS. ANNA LALOR BURDICK

The many friends of Mrs. Anna Lalor Burdick united in expressing to her in tangible form their friendship and high regard for her wonderful service to humanity and education. A Life Membership in the American Vocational Association was the token of esteem and as one person said expressing the sentiment "that we always want her with us."

Mrs. Burdick's experience has been

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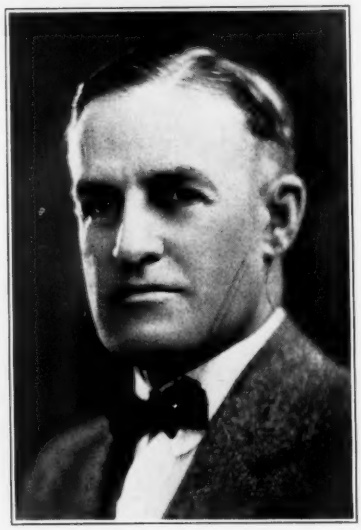

L. H. DENNIS

L. H. Dennis is a native of New Hampshire. He secured his elementary school training in the public schools of Dover. His secondary school education was obtained in the Brewster Academy at Wolfboro, New Hampshire, and in a private boarding school in Westtown, Pennsylvania.

He is a graduate of the State Normal School at Bloomsburg, Pennsylvania, and of Pennsylvania State College, State College, Pennsylvania. He has done graduate work in Bucknell University, Lewisburg, Pennsylvania, in Cornell University and in Teachers College, Columbia University.

He has had a varied practical experience including farm experience in New Hampshire and Pennsylvania and machine shop experience in Pennsylvania.

Mr. Dennis has had wide experience in the field of education. He spent ten

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E. L. HUESCH

E. L. Huesch, Supervisor of Trades and Industries for the Ohio State Board for Vocational Education, was born in St. Marys, Ohio, and, after graduating from Wooster College, returned to St. Marys as a teacher in the local High School.

In 1909 he became associated with the Columbus Public School System and, in 1916 was promoted to the Principalship of the Columbus Trade School. In 1918, in recognition of his outstanding accomplishments in this school and in soldier training work, Mr. Heusch was selected to be Supervisor of Trades & Industries for the newly organized State Board for Vocational Education for the State of Ohio.

Since that time, thru his unselfish efforts, exceptional leadership and clear humanitarian vision, Mr. Heusch has made the Ohio Trade & Industrial Program one of outstanding effectiveness and importance in the United States.

At the present time the program is serving a total of 24,029 individuals requiring 810 instructors. This program demands a yearly budget of $993,000.00 of the State and Federal funds as against the expenditure of $32,000.00 for the fiscal year of 1918.

In 1921, at Middletown, Ohio, during a meeting called by Mr. Heusch, the Ohio Vocational Association was formed to further the aims of Vocational Education. This Association later joined the National movement and is now a branch of the A. V. A.

In recognition of its indebtedness to Mr. Huesch, the Ohio Vocational Association as a body, voted to present Mr. Huesch with a Life Membership to the A. V. A. This presentation was made at the evening banquet of the A. V. A. Convention at Milwaukee, December 12th, 1930.

MRS. BURDICK

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that of a pioneer blazing new trails as a student, as a worker and a teacher. She was born at Villisca, Iowa, the daughter of Margaret Nihen and John C. Lalor, both born and educated in Ireland. Her father was a pioneer in the building of the Welland Canal, and later of the Burlington Railway west across the States of Iowa and Nebraska to Denver. Her eldest brother, John C. Lalor, was actively engaged in the development of water power and copper properties in the State of Montana, while still another fell victim to a fever contracted in the construction of harbors and waterways in the Southern States. Her son, Charles Lalor Burdick, a chemical engineer distinguished on three continents, pioneered the development of chemical plants in the nitrate fields of Chile.

She won the special privilege of supplementing her liberal arts course at the University of Iowa with instruction in the department of engineering; was employed as a draftsman in a railway survey which located a line over the Rocky Mountains from Denver to Leadville; later working as a mechanical draftsman for a firm of Patent Attorneys in Chicago, where she made sketches of machines, working drawings, and prepared specifications in plants and factories. When no women other than day laborers were to be found in industrial occupations and before inspection and organization had made conditions tolerable for women and children workers, Mrs. Burdick resolved that the only solution of the many social and economic problems she observed in industry was through an educational program.

Mrs. Burdick spent twenty-five years in the field of Education and Public Welfare in the state of Iowa as teacher, principal, as one of the first women to hold the position of City Superintendent of Schools, as an instructor in the State College and as a working member of various State Commissions on problems of education and of labor. As Secretary of the State Commission on Vocational Education and Vocational Guidance she studied both the needs of the workers and of the industries of Iowa.

Mrs. Burdick is a graduate of the State University of Iowa, and of special courses at Harvard and Chicago Universities; has studied the problems of education and industrial relations in England and the Continent as well as several centers in the Pan American countries and assisted in the developing of training programs for women in the war essential industries.

O. D. ADAMS

O. D. Adams, State Director of Vocational Education in Oregon, was educated in the public schools ofWashington; attended the Bellingham Normal and the University of Washington. He will complete the requirements for a Masters Degree in Industrial Education at Oregon State College in July, 1931. He served in the capacities of principal and superintendent in Washington High Schools before resigning to enter the war. The next fourteen months were spent in active service over seas in company "I" of the 361st Infantry, 91st Division, which served in four offensive sectors.

Continuing in the education field after the war, he was connected for seven years with the Seattle Public Schools as Industrial Coordinator. His varied experiences in logging engineering, lumber and shingle mills, and as an apprentice in the plumbing trade, have furnished a background which enables him to be truly sympathetic with the practical worker. Before being appointed to his present position, Mr. Adams acted as State Supervisor of Trade and Industrial Education in Oregon, and as Associate Professor of Trade and Industrial Education at Oregon State College.

Mr. Adams has been a leader in Vocational Education ever since his entrance into the field. This is evidenced by his having served as president of State Vocational Associations in both Washington and Oregon and of the Inland Empire Vocational Association and as Secretary of the Vocational Association of the National Educational Association. He is a member of the legislative and publicity committees of the American Vocational Association and was appointed by former President Paul W. Chapman as a member of the cooperative group which met with the Wilbur committee.

JOHN F. ARUNDEL

John F. Arundel recipient of a Life Membership in the American Vocational Association from the Trade and Industrial Education teachers of the Cincinnati Public Schools is deserving of all the recognition accorded him. Mr. Arundel has served the Public Schools of Cincinnati continuously since 1907 having come up through all the experiences of teacher, principal and director in both the elementary and secondary systems.

Mr. Arundel graduated from Ohio State University in 1906 with the Bachelor of Arts degree and spent the following year in the Cincinnati Arts Academy. In 1918 he was made Director of Vocational Education for the Cincinnati public schools and has held that position to the present time. During the war he was made Director of War Education in charge of the training of drafted men for the United States Army in the Cincinnati Schools.

Cincinnati has, under Mr. Arundel's guidance, organized a system of industrial and commercial preparatory schools of secondary rank parallel to and coordinate to the system of college preparatory secondary schools.

Mr. Arundel has been known for his advocacy of occupationally segregated schools instead of cosmopolitan schools. He has insisted that vocational guidance must be based upon economic and social factors instead of those depending upon a psychological basis. He has claimed that a successful vocational school will have a portion of its time on a co-operative basis.

Based upon the above, this type of secondary education in Cincinnati has experienced the growth from a few hundred in 1919 to over three thousand in 1930.

MR. CHAPMAN

Continued from Page 18

scope and in effectiveness. It became one of the outstanding programs of instruction in vocational agriculture in the country and it is safe to say that the people in Georgia know more about their instruction in Agriculture than they do about any other branch of scholastic endeavor.

As a consequence of the above, Mr. Chapman was made State Directorof the Vocational Education program in its entirety. He immediately began to demonstrate his leadership in this wider field with the certain and inevitable result that he was elected President of the National Association of State Directors. While serving in this capacity he became interested in National Vocational Legislation and represented both the National Directors Association and The American Vocational Association upon their national legislative committees. Due to his splendid service and the intimacy with which he knew the details of this work it was inevitable again that he should be accorded the outstanding position of leadership in vocational education in this country, becoming the President of The American Vocational Association.

At the present time Mr. Chapman is a member of the "Wilbur Committee" and as such is performing as effectively as his record would lead you to suspect he would.

MR. DENNIS

Continued from Page 18

years in the public schools of Pennsylvania as high school principal and district supervisor of schools. He taught in college two years.

In 1912 he was appointed specialist in agricultural education in the State Department of Public Instruction in Pennsylvania and in 1920 was advanced to the position of state director of vocational education, a position which he now holds. In 1925 he was appointed Deputy State Superintendent of Public Instruction.

For many years he has been active in the national program of vocational education, as a member of the executive committee of the National Society for Vocational Education and the American Vocational Association and as president of these organizations from 1923 to 1925. He has been one of the leaders in the National Association of State Directors of Vocational Education since the inception of that organization and served one year as president of this association.

In recognition of his leadership in the field of vocational education, more than one hundred of his friends joined in presenting him with a life membership in the American Vocational Association.

E. B. MATTHEW

A life membership in the American Vocational Association, the first ever bestowed in Arkansas, was presented to E. B. Matthew, State Director of Vocational Education, in the State Department of Education, by the vocational forces of Arkansas, at a luncheon given by the Arkansas Vocational Association, Thursday, November 13, at the Hotel LaFayette.

The presentation of the life membership in the national association was a complete surprise to Mr. Matthew, who, in 1929, assumed the position of State Director of Vocational Education, promoting the vocational programs in agriculture, home economics, and trades and industries.

The Life Membership Certificate was presented by C. R. Wilkey, Vice-president of the Arkansas Vocational Association, in a brief address as representative of C. M. Hirst, State Superintendent of Public Instruction, whose duties as President of the Arkansas Education Association which convened Thursday, prevented him from attending the luncheon.

Mr. Matthew has been connected with the vocational division since 1918, coming to the State Department of Education in that year as State Supervisor of Vocational Agriculture from the University of Arkansas, where he was Professor of Agricultural Education. He had previously served as High School Inspector for Kansas and as Professor of Agriculture at the Kansas State Teachers College, Fort Hays, Kansas. Mr. Matthew was appointed Director of Vocational Education for Arkansas in 1929. He was made a vice-president of the American Vocational Association at the New Orleans meeting, in 1929.

Life Membership Acceptance

To the A. V. A. Secretary:

It is with pleasure that I accept life membership in the American Vocational Association, Incorporated. I do this with the understanding that my life membership fee becomes a part of the permanent fund of the association and that the interest therefrom will render service to vocational education for all time.

I am enclosing a check for $100.00 or $25.00 or $10.00.
(Underscore)
I will pay the remainder in 3 or 9 annual installments.
(Underscore)

*Name*_____ *Title*_____

*Postoffice*_____ *State*_____

*Date*_____

Mail to: DR. Z. M. SMITH, SEC.
THE AMERICAN VOCATIONAL ASSOCIATION
ROOM 225, STATE HOUSE, INDIANAPOLIS, INDIANA

Life Memberships
in the
American Vocational Association

The magnificent achievement of Wisconsin in securing 60 A. V. A. life memberships last year is a compelling challenge to other states. The impetus that Wisconsin has given to the life membership campaign will impel other commonwealths to make vigorous efforts to equal and even to excel this outstanding accomplishment of the Badger State.

Purpose of Life Membership

The fund derived from life membership fees constitutes an endowment from which an assured income will be derived annually. The chief use to be made of this income is the financing of research in vocational education and the publication of the worthwhile results from these research studies. Increased effectiveness of vocational instruction is predicated on a sound vocational education program based on a knowledge of the actual needs to be met. Research is necessary to supply the information required for formulating, developing and maintaining courses of instruction that function effectively in the daily life of juvenile and adult workers.

Life membership in the A. V. A. is the paramount means by which one can perpetuate his support of a program of research and extend into the far future his personal contribution to the welfare of both young and adult workers.

The American Vocational Association is the only national organization in the United States that is concerned exclusively with vocational education. Life membership in the organization is the one opportunity for men and women to unite their efforts perpetually in promoting, establishing and maintaining vocational education service in agriculture, home economics, trade and industry, commerce, part-time classes, civilian vocational rehabilitation.

MEMORIAL ENDOWMENT MEMBERSHIP

An individual, association, or group may memorialize a deceased friend by purchasing a memorial endowment membership for one hundred dollars or more on either of the payment plans for a life membership.

Membership Plans

One can become a life member by the payment of one hundred dollars. This payment can be made on one of the following plans:

1. Payment of one hundred dollars cash.
2. Payment of ten dollars cash, and the balance in nine equal annual installments.
3. Payment of twenty-five dollars cash, and the balance in three equal annual installments.

There is no interest obligation to be met in either of these plans.

Schools may purchase life memberships the same as individuals.

APPLICATION BLANK

I.....Official title.....

hereby remit .....dollars for life membership in the American Vocational Association, Inc., for myself or ..... (If not for self, insert above the name and address of the beneficiary)

THE OBLIGATION OF VOCATIONAL EDUCATION TO BUSINESS

Continued from Page 9

course of study in Atlanta, if it is not thirteen years ahead of the times, then it is out of date.

The child in Atlanta, five years old, in kindergarten, is going out thirteen years from now; if I cannot plan that course of study so that when he steps out thirteen years from now, he is in step with business and a little ahead of it, then I fail to do my duty.

It is amazing to me to think how many people think of vocational education in the shape of machines. They go to business houses to get old machinery with which to teach folks how to lead business out of the wilderness. We will never lead business out of the wilderness that way.

What an institution ought to have is the best pie making machine in the world, the best bread making machine in the world; what it ought to have is the finest automobile engine; it ought to be so far ahead of commercial aviation with its aviation courses that is leading aviation into new fields; it ought to be teaching television; it ought to be teaching how to answer the questions, 'What is agriculture going to be thirteen years from now? What will the metal trades be thirteen years from now?'

It is an obligation we owe to the world. Teachers must lead, they cannot simply follow.

I want to mention one other thing. We have to see to it that the government of this country does its share for vocational education. I am proud to be from a state where at least we had some leaders along that line. What you call your Smith-Hughes law was introduced in Congress by Senator Smith and Congressman Hughes of Georgia. Your Vocational Trades Act, that multiplied in many respects the usefulness of vocational work, is the product of Senator Joyce of Georgia.

You are not simply to teach in that class room, not simply to get better material, not simply to lead, but you are to see to it that sentiment in Milwaukee, in Wisconsin, in the rural districts, is moulded around this idea that your government must take a part in reshaping and retraining and remoulding society year by year. It is always going to be this way; if the world don't keep on growing, then it will die.

It is an amazing thing to me how we think. We go to Congress and get sixty million dollars because it did not rain somewhere. I don't want you to misunderstand me—I am not opposed to that, but that was a purely temporary thing; it is just as likely to rain three times as much next year.

We can go to Congress for Florida and get all the money we want to kill an imaginary Mediterranean fruit fly! We can go to Congress for Texas and get all the money we want to cure the hoof-and-mouth disease, but let us mention that we are going to improve the calibre of our people and three-fourths of the folks of this country say, 'Oh, education is a state function, we must not let the government interfere with it.'

We can go to Congress and get one hundred million dollars for roads because they are the first line of defense, our Congressmen say.

I am going to tell you what the first line of defense is,— the intelligence of the people of this country is our first line of defense. So long as we say that the roads, the hoof-and-mouth disease, droughts, floods, snows, tempests, purely temporary things, may be assisted with appropriations, but we cannot increase our appropriation for vocational education, we are simply cutting off our noses to spite our faces.

I want to close with these two thoughts: what are you doing, teaching somebody to make some little thing, bake a better pie, build a better machine, do a better piece of leather work, or weave a little better textile? Is that all you have?

Let us get a conception of our job. I know some of you work in grease, I know some of you toil in kitchens, some of you teach in cafeterias, in this that and the other; what we are doing is not a little thing, teaching vocation on vocation to boys and girls—we are building American business, that is what we are doing and I want you to go out with that conception.

The second thing I want to say is bigger than that. You are not only building American business, but you are building character when you get that boy who needs to be adjusted to work he ought to do, that girl who is going to drop out of school and would not stay in because of the regular course, that man who needs retraining, that forty-year old, who is becoming dissatisfied and disgruntled and will soon stir up the whole factory and community,—when you have invited them into school and class, got their hands and their minds busy on a project and busy on making themselves wiser and better and stronger and truer you are doing something inside that is infinitely worthwhile, you are building American citizens who believe in their work, who believe that their work is their greatest joy, their greatest opportunity to serve humanity. When you have done that, you have helped to build a character that will stand the test of time, that will make your city stable, your government stable and bring about an economic situation that will bring relief to this country.

There can be no cultural relief without economic relief. One thing that business has to do is to see that social progress keeps in touch and in step with scientific progress. You people who have in mind, the social idea, the business idea, and the educational idea, have an opportunity to instill them into the future business man. If you do your job well, business during periods of prosperity will provide for periods of depression and labor shall be taken care of, peace and harmony shall prevail, and we shall build not only business, but what is better, the soul of man.

* *Address delivered before the General Session of the Fifth Annual Convention of the American Vocational Association, Milwaukee, Wisconsin, December 10, 1930.*

"THE OBLIGATION OF VOCATIONAL EDUCATION TO BUSINESS" HAS BEEN PUBLISHED BY THE AMERICAN VOCATIONAL ASSOCIATION IN A SPECIAL BULLETIN No. 6. COPIES MAY BE SECURED IN QUANTITY FROM DR. Z. M. SMITH, SEC., ROOM 225 STATE HOUSE, INDIANAPOLIS, IND., AT 5 CENTS EACH.

Vocational Art Students

We want Pen Sketches for the News Bulletin

illustrating Vocational Training. We will pay $1.00 for each one we use!—*Editor.*

THE NATION'S DEBT

Continued from Page 11

tience, thrift, industry and punctuality. From her studies she has obtained a wider view of life as a whole, a new sense of relative values and the necessity for group action.

In the change and stress of our modern civilization, there is much need of Better Homes, whether in city or country. In our more crowded centers much that formerly went with homes must be disregarded. More and more will the responsibility rest upon the home in the open country and it is the job of every woman in America to see to it that every honorable means is taken to preserve it as an American institution of the highest type.

* *Address delivered at the Banquet Session of the Fifth Annual Convention of The American Vocational Association, Milwaukee, Wisconsin, December 12, 1930.*

AGRICULTURAL EDUCATION

Do You Have a Question?

(Is it worth a dollar?)

THE QUESTION BOX

PROBLEM 1

Problem 1—My class and I operate a seed corn testing box for the farmers of the community. To what extent are we justified in using school time for this work?

Address The News Bulletin Editor, Room 225 State House, Indianapolis, Indiana.

$5.00 will be paid for the best answer received by March 15.

Do You Have an Answer?

(It may pay you)

DEVELOPMENT OF DAIRYING IN WISCONSIN

By A. J. GLOVER
Editor, Hoard's Dairyman
Fort Atkinson, Wisconsin

This great industry hasn't "just growed" like Topsy. Since its inception it has had a directing force—men of vision and honest leadership who could see what the cow would do for this state provided she was given proper conditions under which to work. In order to coordinate the dairy forces of Wisconsin, the Wisconsin Dairymen's Association was organized in February, 1872, under the leadership of W. D. Hoard, who in after years became the leader of dairying not only in Wisconsin but in America, if not in the world. This organization came into existence because there was needed a united force to guide and develop the dairy industry of Wisconsin. The agricultural conditions in this state were bad and it was conceived at this time that the cow should become an important factor on the farms of Wisconsin. Wheat was the chief crop and it had been constantly grown for years without regard for the final judgment. This style of farming so impoverished the soils of Southern Wisconsin that on the average only eight bushels of wheat were produced per acre. This low production caused farmers to sell out and move to other states that they might continue the same system of farming, for they did not understand what should be done to make farming more profitable.

The experience of the farmers of this state has been paralleled in many states where the single crop system has predominated for many years. Every state that made wheat its chief crop and paid little attention to the rotation of crops or live stock, has sooner or later been forced to change its system of farming. It takes considerable force to change the system of agriculture in any section, for human beings are creatures of habit and it becomes natural for them to follow an accustomed practice. Further, wheat raising is a delightful occupation and when the years are favorable and prices good, it pays well. I know of no state or section that has been devoted for a series of years to a single crop system, whether it be wheat, corn, or cotton, where farming gives satisfaction or farmers are contented with their lot.

In 1870 the income from dairy products, as near as can be calculated, amounted to $1,000,000. There were a few cheese factories and creameries, but most of the dairying was done in private dairies. At that time the state had no market for its products and one of the accomplishments of the Wisconsin Dairymen's Association was a market for the dairy products of Wisconsin. Furthermore, they advertised the products of this state. Eastern commission merchants held that butter and cheese made in Wisconsin were not of such good quality as that made in New York, then the leading cheese state of the nation. Freight rates were secured that made it possible to ship cheese to New York, from which point some of it was exported, for the quality of Wisconsin cheese was, on the contrary, such that it found a ready market. Refrigerated cars were obtained for shipping our dairy products and attention was given to instructing cheesemakers and buttermakers in the production of quality products. To let the public know the quality of Wisconsin dairy products, exhibits were made at the National Dairy Show in the early 70's and at the Continental Exposition in 1876. Getting a market for Wisconsin dairy products, advertising their qualities, and providing suitable transportation for carrying them to market in good condition, were the first things the leaders of Wisconsin, who had formed the Wisconsin Dairymen's Association, did in building this tremendous industry which now brings the state nearly $300,000,000 a year.

Wisconsin produces 70% of the cheese manufactured in the United States, stands third in butter production, and first in the production of condensed and evaporated milk. It leads all states in the production of milk.

The dairy cow fitted admirably into the farming operations of Wisconsin because its climate, soil, and water were adapted to the production of quality dairy products. Under these conditions, it did not take long before the cow was a very important factor in the farming operations of Wisconsin. She has enriched the land so that it produces even more corn, barley, or wheat than when it was first brought under cultivation.

What Kind of a Cow

The character of cows kept on the farms in Wisconsin was not neglected. In the beginning there were those who felt they should combine both beef and dairy characteristics in the same cow. The leaders to whom I have referred felt they could not afford to go to all the expense of becoming dairy farmers unless they could produce the most milk for feed consumed. This meant breeding to bulls whose ancestors were trained to produce the most milk from grain and roughage economically. Testing of cows was begun so that low producers might be located and eliminated. Great debates were waged over the kind of cow to be kept and what must be done to get the greatest profit.

Real progress has been made, but effort is still necessary to keep in the mind of the dairy farmer that it is essential to eliminate low producing cows and keep those that are capable of producing a profit over feed consumed.

The cow testing association came into Wisconsin twenty-five years ago and has been a potent agency in getting the farmer and breeder to see that if any profit is to be made, his cows must be capable. Too much cannot be said in favor of the good cow, for without her there is little or no profit to be made from the dairy business.

Crops for Cows and Soil

It early became evident that crops must be grown that would provide feed for the cow and be a benefit to the soil. The soil is the foundation of agricultural prosperity; it is the foundation of civilization itself. There is no more important thing to consider in the advancement of our nation than the soil, for from it comes our food and raw material for clothing. No nation is secure without a rich, productive soil, and in the building of a system of agriculture, we must direct ourselves to this end.

What relation does the cow bear to keeping the soil fertile and full of its life-giving properties? How does she do it?

Dairying cannot be made profitable unless most of the feed is raised on the farm. The best feeds to raise for dairy cows are those rich in protein; namely, the clovers, alfalfa, soy beans, in fact all the legumes, choosing those best adapted to a particular section. In growing clover, alfalfa, soy beans and cowpeas, we enrich the soil as well as provide protein feeds for the dairy cow. The soil is enriched in nitrogen and organic matter, both of which are essential to a productive soil.

It is evident that the soil needs legumes and the cow needs them also. The cow furnishes a market for feeds of the farm that would have none without her. In sections where the dairy cow is not kept, especially in the West, hay sells from $5 to $10 a ton, while in Wisconsin it readily sells for $20 to $25 a ton. The dairy cow not only supplies a market, but she advances the price of hay. Further, she returns from 60 to 70 per cent of the fertility to the soil which is necessary to produce this crop. Butterfat is largely condensed sunshine. There is little fertility in butterfat. When 100 bushels of wheat are sold, about $12 to $15 worth of fertility are taken away from the farm.

When we consider the relationship which the cow bears to the land, what the soil means to the people, how the cow utilizes waste that would not bring the farmer any return without her, how she increases prices of other farm products, how she adds to the price of hay on the farm, how economically she produces milk and that it is the most perfect food on earth, it becomes evident that this animal is the most important factor in our development of agriculture and the most stabilizing force in the nation. As we go forward in this country and become more intelligent about our diets, the dairy cow will hold a still more prominent place in agriculture.

To recapitulate: when the leaders in dairying comprehended that the brindle cow, the dash churn, and the grocery store market were obsolete, they banded themselves together to improve the cow, to improve methods of manufacturing dairy products, and to improve the markets. Before dairying could become a virile industry, organization was required; leaders with visions and honest purposes must offer their services; and science and good business practices must be applied. The outstanding accomplishments of the Wisconsin Dairymen's Association may be tabulated as follows:

1872—Organized by W. D. Hoard and six others. Secured a reduction of 60% on freight rates on cheese.

1873—Secured use of refrigerator cars that opened the world's market to Wisconsin cheese. Started cheese boards to aid marketing.

1875—First dairy fair in the United States held at Milwaukee under auspices of Wisconsin Dairymen's Association.

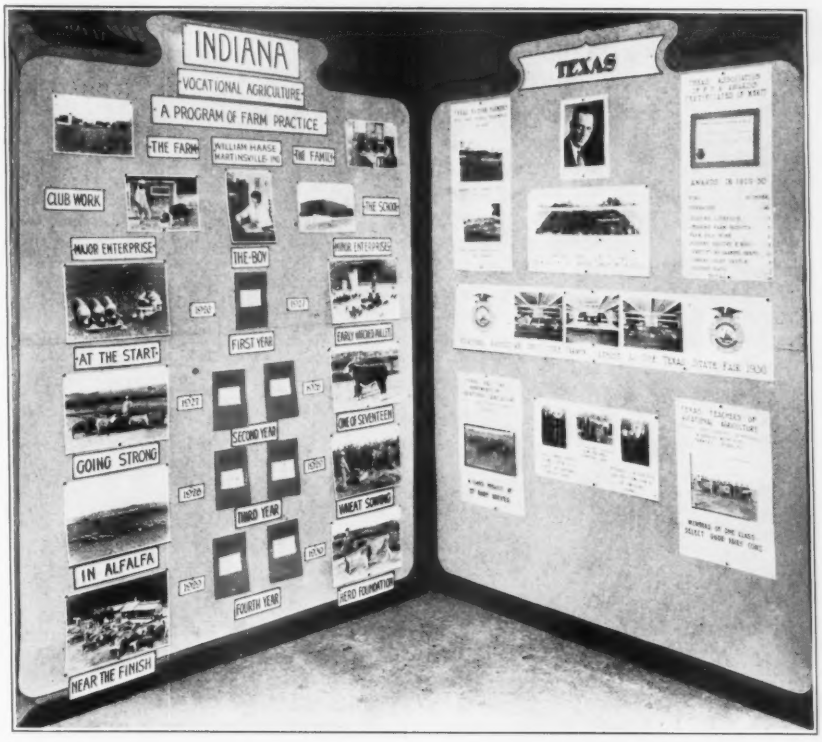
1876—Exhibited butter and cheese at Centennial Exposition, securing favorable trade outlets.

1878—Promoted exhibits New York International Dairy Fair.

1879—Started agitation against oleomargarine.

1880—Silo propaganda started with address by L. S. Gilbert of Fort Atkinson on experience with silo built in 1877.

1881—W. A. Henry, new "Professor of Agriculture" at University gives first address, "Standard Dairy Rations."



The above depicts two of the state exhibits set up at the recent American Royal Livestock Show at Kansas City.

The Texas exhibit calls attention to some of the state and local accomplishments of the Texas Association of Future Farmers of America and was one of the best exhibits made at this show.

The Indiana exhibit portrays a program of farmer training as it is conceived in that state. The exhibit tells the story of William Haase of Martinsville, Indiana, referring especially to the part of his training that came through the opportunity for supervised farm practice. William is one of Indiana's outstanding Vocational Agriculture graduates and was awarded an American Farmer degree of the Future Farmers of America in their 1930 Congress at Kansas City.

1882—Promoted Grand Union Dairy Fair at Milwaukee. Promoted development of the College of Agriculture.

1884—Opened southern markets by exhibit at Cotton Centennial at New Orleans. Engaged first traveling instructor, later increased to four, to aid creameries and cheese factories.

1885 — Supported bills creating farmers' institutes and the State Board of Agriculture. Started agitation for keeping records on cows.

1887—Discussed necessity of convenient test for fat in milk that inspired Professors Henry and Babcock. Supported bill in Congress for establishment of experiment stations.

1888—Proposed changes to strengthen oleomargarine law.

1889—Secured passage of bill establishing the Dairy and Food Commission. Supported proposal for a National Dairy Show.

1890—Aided University in establishing the first dairy school in America.

1891—Successfully opposed plan to abolish dairy and food commission. Suggested state brand for cheese. Made provision for exhibit at World's Columbian Exposition.

1895—Drafted and secured passage of filled cheese law.

1901—Urged state aid in improving country roads.

1906—Finally succeeded in enlarging scope of dairy and food commission and turned over to it the inspection work it had been doing for previous 22 years. Started first cow testing work in Wisconsin and turned its major attention to problems of farm production. Asked that U. S. Dairy Division be raised to rank of dairy bureau.

1907—Mr. Searles made first report on cow testing.

1908—Urged law requiring pasteurization of skimmilk and whey.

1911—Proposed a registry for dairy cattle, based on production.

1914—Supplied cows for cow test exhibit at National Dairy Show and for each annual show thereafter when held in Chicago and St. Paul. U. S. Dairy Division commenced to share in expense of C. T. A. work.

1915—College of Agriculture commenced to share in expense of C. T. A. work.

1916—First annual meeting of cow testers. Established Wisconsin Register of Production. Promoted legislation to release cooperatives from anti-trust penalties in attempting to secure adequate price for milk. Discussed prospective danger of filled milk.

1921—Asked legislature to prohibit manufacture and sale of filled milk and joined others in securing passage of such a bill. Promoted legislation to forbid use of dairy terms in advertising imitation dairy products. Put on exhibit, "Fifty Years of Dairy Progress" at National Dairy Show at St. Paul and conducted sale of R. O. P. cows, which gave Wisconsin great publicity as the home of good cows.

1922—Collaborated with others in establishing a marketing program for Wisconsin. Celebrated 50th Anniversary.

1924—Issued call for federation of all associations interested in dairying. (This failed.) Started "proven sire campaign."

1926—Called for investigation of measures to control mastitis as one of the most serious diseases confronting dairy farmers.

1928—Promoted the building of exercise yards for safe and sane control of bulls.

In this review of the forces which have developed the dairy industry of Wisconsin and placed the agriculture of this state upon a better basis, it is clearly evident that capable leadership was required. It is also clear that planning and work improved farm practices and that no governmental assistance was sought in this period of development. It reveals, it seems to me, that it was through the people of the industry, supported by proper legislation to give full opportunity for development, that an industry was developed upon the right basis.

We are now confronted not only with dealing with the factors which have built our industry, but new ones have entered. New conditions must be met. Before we can deal with them intelligently, we must understand them and get a vision of what is to be done to use the new agencies in the proper way.

The advent of machinery, while permitting increased production and taking the drudgery out of work, is a disturbing factor in our economic relationships. Our task is to learn how to use it effectively. It is not my purpose to discuss in detail the changes which are taking place in agricultural practices or to speculate upon what they will be in the future. It occurs to me that relating some of the things that are being done will be more effective than confining myself to discussing what might be termed "successful farm practices." It is for me to give you a vision of changed conditions, new practices in agriculture, that you may direct yourselves to help to solve our present agricultural problems.

To accomplish this I shall relate a new system of farming and milking developed by one of my friends, H. W. Jeffers, President of the Walker-Gordon Laboratories Company, Plainsboro, New Jersey. This company keeps 1600 cows at Plainsboro and produces certified milk. Mr. Jeffers has developed what he calls centralized leadership and decentralized operation of his farms and cows. The several thousand acres which his company owns have been divided into small farms ranging in size from 120 to 160 acres. These farms are rented to farmers who operate them as their own and the crops raised are purchased by the men who take care of the cows.

The cows are owned by the company but rented to those who feed and care for them. The milk is sold in the udder and the Walker-Gordon Laboratories Company milks the cows.

An evening class in vocational agriculture being conducted by A. T. Marvel at Middlebury, Indiana. Mr. Marvel is one of the pioneer vocational agriculture teachers of Indiana. As long ago as 1912 Mr Marvel taught an evening school in this community.

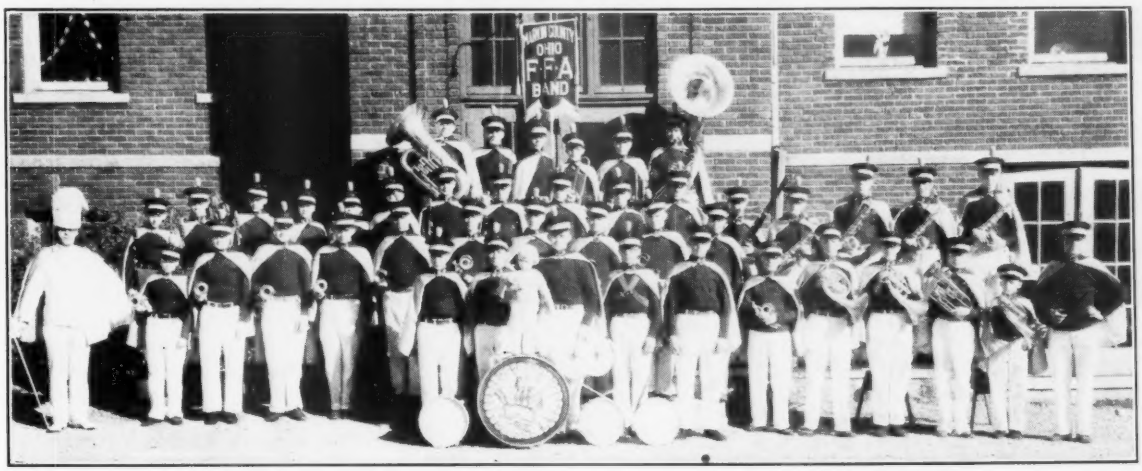
That milking may be economically done and under the best sanitary conditions, a new method of milking was developed by Mr. Jeffers. It is a revolving platform, a Roto-Lactor, holding 50 cows, and makes a complete revolution in 12½ minutes. On this revolving platform the cows are milked. Each cow is provided with a milking machine and above her is an inverted glass jar holding her milk. The cow enters the platform while moving and when in place a stanchion automatically closes about her neck. One of the attendants washes her flanks and udder with water; another dries her with hot air generated below the Roto-Lactor. The next attendant puts on a sterilized milking machine. When the cow has had her ride on the merry-go-round, the job of milking is completed, the stanchion opens and she walks off the platform back to her barn. I might add that the humidity and temperature of the air in the room in which the revolving table is built are artificially controlled. This method of milking and the conditions surrounding the cow, as Mr. H. W. Jeffers puts it, is the answer to a cow's prayer.

Immediately there comes to your mind, is this practical? Will it become in general use on the farms of this country? These questions I shall not attempt to answer. This Roto-Lactor is the only one of its kind in the world and maybe another one will never be built, but still it may have the influence of revolutionizing dairy practices. On the farm on which this Roto-Lactor operates there are 1,600 cows that are milked three times a day. Two men are required to handle the milking machines and they work eight hours a day, but the milking operation is continuous. It requires three shifts of men to take care of the 4,800 milkings a day. This new way of milking releases 75 men and the owner estimates it will save him $100,000 a year in labor expense. That is something to think about.

We can speculate still further. In this farm there are several thousand acres of land. It was operated as one farm. This was corporation farming under a large scale. The cost of producing the feed for the cows under this system became excessive. This caused Mr. Jeffers, the manager, to change his system of operating the land and to rent tracts ranging from 120 to 160 acres to each person to operate. Since these men became their own bosses, they are producing twice as much feed as when they were working for wages. This shows the difference between working for wages and working for self.

The principal crops grown on these farms are corn and alfalfa. The corn is ensiled and the alfalfa is artificially dried. These methods of preserving the feed produces the highest quality product. The silo is a well known and established institution. The artificial hay drier is still new and in the experimental stage, but it has been in operation long enough to reveal that it produces the finest quality of feed for dairy cows. The question to be answered is, will it be practical on the ordinary farm? Will the inventors so perfect it that one hay drier can be owned by a few farmers? It is a great advantage to take the green feed as it is cut and haul it directly to a hay drier. It saves labor, storage space, and provides the best quality of feed. The question to be answered, is, can its operation be made practical for groups of farmers?

Corporation farming does not appeal to me as being the solution of our agricultural problem. The farm family is too important to our civilization and the family sized farm too attractive an occupation to be superceded by industrialized farming. The advent of electricity and labor saving machinery make necessary a changed system of agriculture. New farm practices must be instituted. Will they be in the form of federated farms where machinery can be used advantageously? Or, will they be in some other form? It is evident we are confronted with the problem of changing our farm practices and we must think out together the best plan to follow.



The accompanying picture shows the Marion County, Ohio, Future Farmers of America Band which was the official band at the recent National Convention at Kansas City. This band is made up of farm boys every one a student or graduate in vocational agriculture and a member of Future Farmers of America. Even the director, Oscar Koelber, (right), is a young farmer in the county and a member of the part-time class at Waldo. The band, developed by Mr. Koelber among the students in the eight vocational agriculture departments in the county, has been organized less than a year and has grown in that time from fifteen to forty-four pieces. The vocational agriculture teachers, county board of education and county superintendent of schools, C. B. Rayburn, have contributed much to the success of the band. The band has played at a large number of meetings in the county and state. It will give a concert at Ohio State University during Farmer's Week in February. It is the only Future Farmer Band in Ohio and probably the only one in the country. It has won its reputation not because of the novelty of the organization alone but also because of its excellent marching ability and musical talent. This is only one of the accomplishments in the Marion County vocational agriculture program. A number of other Marion County Future Farmers are practicing diligently on musical instruments and this band will probably number sixty pieces next year.

COMMERCIAL EDUCATION

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A SIMPLE PROGRAM FOR SALES TRAINING

By DAVID R. OSBORNE

Training Director, The Studebaker Corporation of America, South Bend, Ind.

If there could be some way in which sales managers, instructors in vocational schools and sales training workers in all fields could impress upon the young man who wants "to get into the selling game" that selling is mostly a matter of doing a few common-sense things thoroughly, a great service would be done not only to the salesmen themselves, but to the present employers of salesmen and to the future employers of young people now in the schools.

If some organization such as the American Vocational Association could go further than encouraging this viewpoint of simplicity and common-sense, practical methods in sales instruction, and could work out some means of following through with training on the job, it would be doing a most constructive piece of work towards solving the problem of increasing efficiency and reducing the cost of distribution.

Let us consider for a few minutes how the salesman's job fits into the social scheme. Is it *worth* teaching?

Certainly, there is no doubt that the rise in the American standard of living—and the increases in real wealth and wages—has gone hand-in-hand with the steady increase since 1890 in the number of salesmen per thousand of population.

Right at this time the salesman and advertising man *who are doing a good job* are even rendering an important *patriotic* service. For sales must be made, not merely attempted, if producers of raw materials, manufacturers and merchants are to meet the demand for employment and at the same time remain solvent.

Not only does the salesman occupy a key position in the general economic and social order, but his *opportunities* are in proportion to the importance of the work he is doing, and are well worth training for.

It would be foolish, of course, to say—as is sometimes said—that distribution is just about the only problem left in industry.

Certainly in a competitive period, like the present, the engineer and the production man who turn out better products for less money, and the financier who provides the funds for building plants and developing markets must do their part well if the salesman is to have a product worth selling. After seeing what the engineers, plant managers and financiers have done during the past ten years, who can say what will be done during the next decade?

After all, however, all of the plans of industry must be based on the expectation of being able to distribute the products that are manufactured.

Let's have a look at some of the problems involved.

At times when business is not so easy to get business men become increasingly sensitive to the huge total of *non-productive* sales expense incurred by reason of the inefficiency still found in present-day selling—and sales supervision. This sensitiveness is by no means a product of the current period which we so pleasantly and euphemistically call the "present business situation", but it is naturally raging in more or less pandemic form just now. It is an ideal time both to clean house and to grade up the human material retained.

Ever since selling became a specialized calling much of the time of salesmen has been wasted—for two reasons: (1) Because of their failure to get an adequate number of contacts with prospective buyers; and (2) because of the overwhelming proportion of the prospects that the average salesman fails to sell—either because of poor selection of prospects or because of his not being skilled in dealing with them. These, combined, constitute one of the largest items of waste in the distribution from makers to consumers.

It is too bad but true that many beginners—and many others who might be classed as "experienced failures"—are not willing to do the things that the better-than-average salesman takes as a matter of course.

They either copy the easier methods of mediocre salesmen with whom they come in contact or else they try to copy the superficial mannerisms and so-called "personality" of the star salesman—or, as is more often the case, they go mulling around in circles trying to build their own experience in the dark.

It is too much, of course, to expect that any quick remedy is possible for a condition that has been going on ever since commerce began. The intangible elements involved in the problem of influencing the actions of either the salesman or his prospect do not lend themselves to overnight change, but they *do* lend themselves to a process of gradual "grading up". And the place to start is in the schools.

Not the least of the difficulties thus far encountered by employers of salesmen has been the half-baked jumble of psuedo-psychology and inspirational exhortation that has been cooked up and served as "salesmanship" courses—possibly not so much in the schools as in industry.

Right here the vocational schools of the country are in a particularly

good position to render a valuable service to both employer and employee, by impressing on the salesman of tomorrow that the job of selling is not one of glamor or of mystery, but is mostly a matter of doing about four common-sense things thoroughly.

In the *first* place, the student of salesmanship should understand from the beginning that the prime requirement of his vocation is so to plan his work that he will be able to make the largest possible number of calls among those population groups where experience has shown that his product is usually sold.

All of us like to think that there is some substitute for work. Finding reasons why he should not make more calls is the salesman's favorite topic for rationalizing. The schools should warn the embryonic salesman against this danger.

John M. Bruce, at one time vice president of the Remington Typewriter Company, used to tell his experience with a certain consistent producer who started out as a rotten salesman. In fact, never improved much, so far as skill in dealing with people is concerned.

He was one of the sort of men with whom every sales manager is acquainted, men whose drawing accounts have got deep into the red, but who are carried on and on in hopes that some miracle will eventually happen to even up the account.

Mr. Bruce finally put this particular man to work on a basis of so much per call, to apply against commissions and to help pull the drawing account over to the right side of the ledger.

The peddler went from office to office, got hold of the boss and asked, "Want to buy a Remington typewriter?" "No." the boss would say, and our hero would plod on to the next office and get the same answer.

Or probably it would be a mistake to say he "plodded." He must have been pretty brisk, for he made 80 calls a day—an average of about 10 an hour, or one every six minutes. Try that on the old legs sometime when the doctor prescribes exercise!

Remember, this man was—and probably still is—a rotten salesman, but every once in a while he ran across someone who said, "Yes, I want a typewriter. Come in. I haven't seen a typewriter salesman in ages."

They practically took the typewriters away from him. He had to let them have them as a matter of self-defence—and during the first month he ran across nine of these. That was more typewriters than he had ever sold in one month before. Finally he got this up to about twenty a month—which is a lot of typewriters.

You people who are teaching salesmanship in the vocational schools will be interested in a similar case which I ran across a little while back. A boy about ten years old had been trying to sell magazines.

He came in one Saturday afternoon and said, "Well, Dad, I feel for the first time that I am going to be a success. I sold 15 magazines today."

His father asked him how he did it, and he told the same story as that of the typewriter salesman—having a lot of doors slammed in his face—some of them none too gently, but the old law of averages was working all the time.

His father helped him to work out a better sales talk and he quickly ran his sales up to 35, and the last I heard of him he had 65 regular customers and was adding more each month.

But this thing of making a lot of calls is only part of the story. For the salesman, fortunately, is in a position to improve his average by improving his methods of *dealing with* people, after he gets in touch with them.

The haberdasher will tell you that on an average a certain number of people wear a 6 and 7-8 hat or a 16 collar, but the skilled salesman can sell you a better hat than you intended to buy and will see that you take away some shirts and neckties to go with the collar you came in to buy.

This brings us to the *second* essential in training salesmen, and that is to get them to realize how important it is for them to learn their products in terms of the benefits the *user* gets from them, rather than in terms of materials or manufacturing processes involved—or of the salesman's own desire to sell.

This is the old case of the taste of the fish, and not the taste of the angler, determining the nature of the bait to be used.

The salesman who does this must use his imagination to put himself in the other fellow's place.

Of course, this part of his training cannot be made mechanical, but it is possible to give the salesman a starting point for his own thinking.

One of the most effective aids in stimulating the salesman's imagination is for him to consider carefully the *motives* that lead people to buy and the *attributes* of his own product that appeal to these stimulants of human desires.

Obviously, there are thousands of motives, but it is fortunate that there are a few which apply to almost every transaction—or at least have an influence with nearly every prospect.

Aside from those motives which apply to the purchase of such fundamental physiological necessities as food, shelter and clothing in their most simple and elementary forms, there are eight or ten motives which are usually spoken of by psychologists as having a major influence on our decisions to buy any product.

The salesman who will consider the application of each of these to his own product will find some solid meat.

Let's consider by way of illustration just three or four motives and the attributes that naturally appeal to them:

1. *Rivalry*. The worthy ambition to excel is one of the strongest spurs to action. Whether we like the idea or not, ours is a competitive civilization. Commercial organizations compete for markets. Individuals compete, let us say, for the esteem of others. Rivalry is the active principle in such attributes of ambition as pride in achievement and the conquest over real and imaginary "conditions" and opponents, as well as pride in the ownership of worthy merchandise.

What *attributes* of any given merchandise or service will appeal most strongly to this buying motive depends on a number of considerations, but one of the strongest is the *reputation* of the maker of the product for quality or its local acceptance as a badge of standing in the community. Many a hat is bought because the purchaser likes to have headgear which he is proud to lay down in such a manner that the label shows—just a little!

2. *Curiosity:* This motive is not only strong in the opprobrious quality of snooperism, but is strong in the "born" scientist or research man. It leads us to want to go to new places and seek new experiences—and to investigate what the salesman has to offer.

Here again the *attributes* which will make the strongest appeal will depend on the product or service, on the salesman and on various circumstances surrounding the sale. In general, however, the appeal lies mostly in the salesman's ability to dramatize old ideas in new ways. Naturally such a reference should be relevant to the prospective buyer's ownership of the salesman's product, and it is especially useful in the salesman's first "approach." An excellent example was that of the babbitt metal salesman who said to the production manager of a certain factory: "I'm not *sure* that I can do a great deal for you, but I have reason to believe I can save you about $50 a year in maintenance charges on some of your machinery." Why *shouldn't* the prospect satisfy his curiosity under such circumstances? !

3. *Fear or Caution:* The basic instinct of self-preservation, and the related instinct of protection for others, are back of this strong buying motive. Of course, this doesn't necessarily mean physical injury alone. Fear of loss of money or of opportunity probably has an even wider application. An aroused sense of caution often justifies a pur-

chase which the buyer would otherwise not even consider.

Obviously, the *attributes* which appeal to this motive have to do with the banishment of fear—and what greater service could be rendered to a buyer than to demonstrate qualities which will not only make fear groundless, but add positively to safety? Many a salesman who will study his product or service painstakingly from this point of view will find possibilities which he had not dreamed of before.

4. *Desire for ease:* This doesn't necessarily mean intemperate indulgence in the delights of laziness—although camouflaged laziness is a motive towards which a great deal of selling effort is profitably and legitimately directed. The sales of household equipment which take so large a place in the state known as "the modern standard of living" have been due primarily to an appeal to this motive. Although time saving and money saving have been brought in as *justification* for buying, the real *motive* was the desire for greater ease.

The natural *attributes* to demonstrate are those which make for comfort, ease of operation and so forth—not forgetting a reminder of the pleasant things that can be done in the time saved or the extra earnings made possible.

A study of the advertisements in the magazines will reveal the great care which is taken to appeal to these and other "buying motives", which would be brought out in a more extended discussion of this phase of selling.

Salesmen can be taught to analyze their own products with such motives in mind and to play up those attributes which appeal to each.

The successful training activities which Studebaker has been carrying on for over five years are based very largely on a simple application of this technique, which has been developed in detail in a text book which the writer has just completed at the request of Harper and Brothers.

The *third* essential in training salesmen is to show them how to determine the *needs* of their prospects and to make the prospect conscious of those needs before starting out to sell.

Sometimes these needs can be learned before the call is made. More often they must be learned on the spot, so that it is important for the salesman to learn the simple technique of "taking the prospect's measure."

Thus, he doesn't have to ask the prospect whether he is interested. (The prospect will say "No" nearly every time—ninety-nine and forty-four hundredths Ivory Soap pure!) He is in a position to *create* interest, because all of us are interested in our own needs.

Having taken the prospect's "measure", the salesman is in a position to apply the *fourth* essential of training: To wit, showing how the salesman's product or service "fits" the prospect's "measure."

Both the third and fourth essentials of this program are of course based on the salesman's *use* of the information regarding the attributes of his product in their appeal to human motives.

In taking his prospect's "measure", the piano salesman, for example, finds that there is a young daughter in the family; an only child; she has been taking lessons and making considerable progress; the mother has had a good musical education; the father, a bank teller, likes good music and would like to play, but can't; the family lives in a modest home which is in a good neighborhood, where most of the homes are quite elaborately furnished; their living room is small.

With such a "measure" there are several motives which will influence the purchase: *Affection* for the daughter and the desire for her to take pride in her music; the family's pride in their home; (rivalry) the mother's pride in her own appreciation of good musical instruments; the father's desire to play some instrument (the motive of *constructivity*); the desire to have possessions in which they can take pride. Besides these and other facts which indicate the various "buying motives" to which the appeal must be made, there is the physical fact of the small living room.

With this "measure" isn't the salesman in a position to fit a high-grade baby grand player piano to that family—making powerful use of such "attributes" as the maker's reputation, the tone and other musical qualities, the simplicity and musical accuracy of the player action and the beauty of the cabinet work?

Why the Salesman's Job is Safe

As has been indicated earlier in this article, the records of the Census Bureau confirm the layman's observation that there are today more salesmen, selling more kinds of merchandise, than ever before in commercial history.

The increase has been more pronounced during the ten years just past than during the preceding ten years, for the past decade has seen the introduction of such large employers of salesmen as radio and electric refrigeration, and enormous expansion in the selling activities of such industries as automobiles, business machines of various kinds, insurance, electric household specialties, and so on.

Shouldn't the young man taking up the job of selling be made to realize, as a matter or pride in his job, that more than any other force this growing army of salesmen is responsible for the difference between the living standards of the "gay nineties" and the comparative luxury standards of today? And, as the essential forerunners of all employment, shouldn't he also realize that salesmen and advertising are responsible for the prosperity which has made possible the adoption of today's standards? That the rush of prosperity has suffered a temporary set-back has only served to emphasize the heights to which it has climbed.

The growing number of salesmen means that competition not only holds its place as the hot spark of commerce —but that the spark is growing hotter —and competition is the very foundation of the salesman's job. For those who have chosen selling as a business career, the increase in the selling forces of the nation, is therefore, most fortunate.

It is true that few salesmen can find it in their hearts to enthuse over the beauties of the competitive system. At any rate, nearly all are ready to testify that most of its volume and the worst of its viciousness are concentrated upon their specific types of merchandise — and particularly upon their own localities or territories.

But to this extent those of us who sell are suffering from delusions of persecution which, if applied to other phases of our lives, would be very liable to bring us under sinister "observation" of the alienist.

The conviction of the individual that he is more than normally pursued by competition is flattering to vanity—and therefore is probably sincere enough. But when stripped to the bare facts it is still shown up in its true flesh tints as an excuse for our disinclination to think and work with our own separate ways out of our difficulties.

Certainly it was true at the time of going to press that there were plenty of bidders for each and every one of the consumer's dollars. At least, all visible producers who were offering any sort of a merchandise or service in exchange for cash, goods-in-kind or other valuable consideration were willing to testify that they had their full share of the competition to meet.

The Patent Office records and the advertising pages of the newspapers and magazines were full of evidence that even the leadership of the most advanced of new products—even the peewee golf courses!—doesn't stay unchallenged long. There still seemed to be ample resources of talent available for improving upon the ingenuity of the pioneer and circumventing the inventor.

Any trail blazer who gave even a slight indication that he might be opening a new way to profits could still count on having a gallery of "adapters" crowding after him in the pathway he had opened.

No sooner did the oil burner pioneers

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CIVILIAN REHABILITATION

AN UNRECOGNIZED FACTOR IN HUMAN EFFICIENCY

By A. C. CROCKETT
Board of Education, Detroit, Mich.

In ages past manual work has been looked down upon. The Roman word labor, as work, meant originally trouble, pain, torment. Man at work was an unworthy subject for scientific interest. Men were born into a social caste, and could not go beyond or above. Among other movements the French Revolution broke down this tradition, and gave to the laboring man a social stand. The "Declaration of the rights of man and of the citizen," paragraph 17, stated that "all citizens being equal in the eyes of the law are equally admissable to all privileges, public positions, and posts, according to their capacity and with no other condition than that of their abilities and talents."

Cities began to fill up with workers in factories. The industrial toll of life started to be taken. The physicians were the first to notice this. Serious sicknesses were traced to chemical factories, coal mines, and glass works of high degrees of temperature. Employers began to pick out the strong lunged, the strong muscled, and the strong visioned persons. Strong eyes were not enough, however, where colors had to be discerned, for some people are color blind. So physiological tests were introduced, taking in the field of the sense organs. The Swede, Holmgren, was the first to examine color vision of locomotive engineers in 1917.

During the last decade neurologists and psychiatrists have given sporadic attention to the different nervous and mental disturbances that have resu.ted from poor judgment to occupational life. The French psychiatrist, Pierre Janet, has cited many examples in his classical work, "Obsessions and Psychasthenie." Another neurologist, Deschamps, observed cases in which nervous and physical disturbances resulted from an overtaxing of strength, the individual being forced to work up to the limit of his capacity until his reserve energy was exhausted. It is obvious then that the scientific study of man at work is of very recent date. It is not surprising, therefore, that we have had no scientific measures of manual ability.

Ninety percent of the population regard psychological tests through colored glasses; either they enthusiastically approve the tests with a naive confidence that expects magic, or they condemn them with a synicism that is equally ignorant of what the tests may be expected to do. Psychological tests are tools that may be easily dulled, or that may become destructive if they are not used by the skilled craftsman. It is a problem for the layman to know who the true craftsmen in psychology are. The Psychological Corporation of New York City is a national organization of trained individuals, and may safely be consulted. As a result of the prejudice for and against psychological tests, psychology has much to live down. In this paper we shall try to establish the right point of view, particularly with reference to the factor of manual ability, and from the standpoint of rehabilitation.

It is a fact that most men do not know what trade or occupation to choose and so leave the matter to accident. Frequently a man does not know the requirements of a trade. More frequently he does not know his own inclinations. In most of us talents and inclinations are not pronounced. It is necessary for a client to frankly admit that a vocational problem exists for him, if the utmost benefit is to be realized from a psychological examination. There is no more constructive attitude than that of the open mind, searching to understand itself more and more completely as time goes on. The wise man is the one who realizes his limitations as well as his assets. He avoids these situations that put him to a disadvantage, and welcomes those that give him an opportunity to use his ability.

Any ability is a complex matter. The football coach seeks the player who can handle himself with speed and dexterity. The better coordination between mind and body a player has, the further he can carry the ball. He must also have strength. Grit and determination cannot be measured in the same way that height and weight can, but they must be taken into account. Thus several factors go to make a good football player. We see that the matter of football ability is not simple, but complex. It cannot be measured by any one yardstick. In the same way a vocational ability is a complex matter and cannot be appraised by any one measure.

Manual ability is one of the important special abilities and is to be given particular attention in this paper. In a review of scientific literature we have found very little reference to this important ability.

Manual ability was what helped lift civilization from a state of savagery. When man began to be clever with his hands he constructed tools. Then he made machines, and civilization grew up. The industrial revolution is the story of manual ability being recognized and put to work. But until very recent years no recorded scientific study of manual ability has been made. The motion picture offers an unexcelled means for studying manual ability. Movements can be stopped, or repeated. A deliberate analysis can be made of clumsiness and skill. A search for the reasons for clumsiness and skill can be carried on under experimental conditions. The Gilbreaths have made important contributions to the science of work, by means of the motion picture, but chiefly from the standpoint of the machine rather than the individual.

We ought to know an individual's index of manual ability, just as we ought to know his degree of intelligence, his mechanical aptitude, his clearness of vision or hearing. Some people possess nervous systems that enjoy rapid work. They can produce twice as much work as can the opposite type of person, and at no greater expense of nervous energy. This one fact is of tremendous significance in the individual's adjustment to his work. The practical men in the shops are wise to this significance. They know very well who the men are who have to be warned not to turn out too much production so that the piece rate will have to be cut. On the other hand, the slow individual is likely to get nervous if he is hurried beyond the natural rhythm of his nervous system. He can do much better if working on a day rate system of pay, rather than a piece rate.*

The moving picture that accompanies this paper has been made for the pur-

*See "*A Measure of Manual Ability*," Journal of Applied Psychology, Oct., 1930.*

pose of showing the importance of manual ability, that is expertness and grace in manual arts. In the picture one can witness two boys, both of the same age, intelligence and educational level, working side by side, one with all the earmarks of dexterity, and the other with all the earmarks of the clumsy worker. You can also witness the work of two feebleminded boys, making a better record than a boy of superior intelligence. A group of experienced telephone splicers are shown to be superior to an unselected group, and yet there are real differences among the splicers in manual ability. Experience narrows individual differences, but the differences cannot be erased. It is possible to observe emotional outbreaks, and nervous conditions by a close observation of the individuals shown in the picture.

If it is important to know the attitudes, interests, and abilities of the average individual before intelligently planning his school course or his training in industry it is doubly important to know these aspects of the handicapped or disabled person. Such a person represents an actual investment in money to those of you who are engaged in rehabilitation work. No good business man would make an investment in money without first insisting upon an appraisal of the property, personnel, financial standing and reputation of any given business. If our investments in the business of rehabilitation are to be sound then we should aim at no less than a complete appraisal. This cannot be done always because the facilities for such an appraisal are not always available.

The function of vocational guidance as described by Mr. Terry C. Foster in his bulletin on Vocational Guidance in Rehabilitation Service is "that of aiding the client through information, demonstration, or other device to select for himself the employment objective that most nearly meets his mental, physical, and temperamental qualifications and interests." Mr. Foster goes on to say that there should be no insistence upon a client's accepting a plan against his will, and at the same time, it may be necessary to enlighten him as to his limitations. This expresses very well a practical difficulty that must be met. We have been inclined to assume that the individual knows what is best for him. The scientific method challenges this assumption. On the other hand, it is quite true that a person must feel that a given course *is* the best for him if he is to put the necessary effort and interest back of it.

No person should be asked to take psychological tests for vocational guidance unless he does so willingly, and with the understanding that such tests are for his best interests and his alone. Frequently it is necessary to disarm people of suspicion, prejudice, or resentment. This is to be expected. People take their motor cars into the garage for overhauling, much more often than they visit a hospital for a physical overhauling of their bodies. How much less inclined would one be to have the inner inclinations and capacities of his mind brought up for a critical appraisal. The problem is one of facing reality. Most of us do not like to do this. Hence, tact and diplomacy are prerequisites in scientific vocational guidance work. The establishment of the right attitude on the part of the client is as important as any other step.

We hold no brief for any psychological test or tests. We advocate a *system of vocational guidance* that takes into consideration the individual's total personality. This means his physical structure, his family background, his early training, and tendencies, the quality of his mind, his spiritual outlook, and the social forces that play upon him. Such a system tends to make vocational guidance a *science*. The *art* of vocational guidance consists in getting the individual to work out his own plan of action, using the scientific results of the system of vocational guidance to assist him.

A SIMPLE PROGRAM FOR SALES TRAINING

Continued from Page 30

demonstrate, for example, that kerosenes and distillates could be made practicable and work-saving fuel for heating a home than countless oil burner factories sprung up and started after the business.

The success of the oil burner, in turn, prodded the coal interests into devising more efficient and easier ways to be comfortable and clean with coal.

Then the public utilities added to the home owner's range of choice by evolving more economical methods of heating with gas—and not only the makers of the various kinds of furnaces, but the producers and distributors of oil, of coal and of gas long ago entered the picture as partisans.

Thus, in a few short years, a most intricate pattern of competition has been built up in the field of home-heating alone—with each manufacturer of combustion apparatus and each producer of fuel requiring his own brigade of salesmen to promote the interests of both his *method* and of his individual *product* with dealers and with the public.

Another inventor with a commercial imagination glorifies, let us say, the old idea of the refillable pencil.

By opening up new possibilities of gain he automatically broadcasts his bushel of dragon's teeth—and reaps an army of competitors, all making color-conscious seven-dollar pencils for users to whom ten cents looked high a few years ago.

Such relentless pursuers of the scent of profit may make life more or less of a burden for the pioneer—but they also do both him and his public a priceless service.

All of this means that the salesman's job has become one of those vocations where the best rewards are not only won by doing the uncommon thing, but also, as the familiar axiom has it, by doing the common things *well*.

It means also that there is a constantly broadening market for the modern type of salesman who has sound ideas on *what* to do, and *how* and *why* he does it.

It is here, as I see it, that we who are trying to raise the average will find our richest opportunities.

But as long as instruction on these subjects is confined to the classroom—either in the vocational schools or in the training clinics conducted by employers—they probably won't get very far. The academic background of the classroom and the blackboard automatically creates the impression that the whole thing has nothing to do with an actual selling situation.

While it is true that the salesman may learn about the product and may get a grasp of basic selling principles in the classroom, there can't be much practical value to his training until these principles are applied on the job under the eye of the instructor, and demonstrated by the instructor in an actual, not a "mock" sale.

Statement of Ownership, Management, Circulation, Etc., Required by the Act of Congress of Aug. 24, 1912

Of AMERICAN VOCATIONAL ASSOCIATION "NEWS BULLETIN" published quarterly at Indianapolis, Indiana for Oct. 1, 1930.

STATE OF INDIANA } ss.
COUNTY OF MARION }

Before me, a Notary Public in and for the State and county aforesaid, personally appeared Z. M. Smith, who, having been duly sworn according to law, deposes and says that he is the Business Manager of the American Vocational Association "News Bulletin" and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management (and if a daily paper, the circulation), etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, embodied in section 411 Postal Laws and Regulations, printed on the reverse of this form, to wit:

1. That the names and addresses of the publisher, editor, managing editor, and business managers are:

Publisher, American Vocational Association, Room 225, State House, Indianapolis, Ind.

Editor, R. W. Gregory, Room 225, State House, Indianapolis, Ind.

Managing Editor, None.

Business Manager, Z. M. Smith, Room 225, State House, Indianapolis, Ind.

2. That the owner is: (If owned by a corporation, its name and address must be stated and also immediately thereunder the names and addresses of stockholders owning or holding one per cent or more of total amount of stock. If now owned by a corporation, the names and addresses of the individual owners must be given. If owned by a firm, company, or other unincorporated concern, its name and address, as well as those of each individual member, must be given.)

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AMERICAN VOCATIONAL ASSOCIATION,
(*Signed*) Z. M. Smith, Secy.

Sworn to and subscribed before me this 26th day of Sept., 1930.

(SEAL) (*Signed*) Mary W. Merrill (Strohl)

(My commission expires 12-15, 1930.

Form 3526.—Ed. 1924.

TEACHER-TRAINING

WHERE AND HOW SHOULD THE ESTABLISHED TEACHER TRAINING INSTITUTIONS FUNCTION IN RESPECT TO EQUIPPING VOCATIONAL TEACHERS WITH BASIC PROFESSIONAL PREPARATION

By HENRY KLONOWER

Director, Teacher Bureau, Department of Public Instruction, Commonwealth of Pennsylvania, Harrisburg, Pa.

In considering this topic one must think in terms of the nature of the product which society hopes to produce. The desirable principles underlying the social group become the determining factors in the development of the future citizens of that society in order to produce these desired ends. In a society such as we have in this country, democracy hopes to produce a citizen, well rounded, capable of taking part in the affairs of his government not only as a follower, but also as a leader. Various aims have been set forth in the past few years which purport to describe in terms of *group purposes* a definition of such well rounded citizens. In terms of the seven cardinal principles of education, we think in terms of the citizen who has been trained along the lines of health, control of fundamental processes, citizenship, vocational preparation, worthy home membership, use of leisure time, and ethical character. A citizen might also be defined in terms of activities such as vocational, avocational, and social. Whatever the group of purposes which one agrees to accept, that training which society endeavors to set up must be founded on the ultimate ideal of the most efficient achievement of the aims already set up.

Those individuals to whom is entrusted the training of the youth of the nation must not only be properly prepared to do the particular work entrusted to them, but must also be imbued with a clear understanding of the aims and purposes of public-schooling.

To this end we must think of teachers in all fields as having both cultural and professional background. Given two teachers, one without cultural background, and the other with a broad, cultural experience, it is not difficult to envision the advantage of the latter as a teacher of impressionable boys or girls.

A teacher-preparation period normally taking four years to complete based on a recognized high school education, undoubtedly will be the minimum teacher-preparation standard for all types of teacher-education within the next few years. This standard will apply to teachers of agriculture, trade, home economics, and industrial subjects as well as to teachers of academic subjects. Each type of teaching activity requires a somewhat different background of experience, but in addition to the background, sound academic education plus adequate trade experience for the vocational teacher, will be insisted upon by Boards of Education of applicants for teaching positions in the public schools.

On page 15, Bulletin No. 42, Trade and Industrial Series, Bulletin No. 150, The Training of Teachers for Trade and Industrial Education, the purpose of vocational teacher training is specifically set forth as follows: "The purpose is to provide *professional training for teaching* to persons already prepared as efficient workers in the vocation in which they are to teach." While it may be safe to assume that teachers selected from the vocational fields are efficient workers in their vocations, it is a fair assumption that very few, if any, are familiar with the techniques of teaching and the fundamental purpose of a national system of public education. Basic professional preparation for teaching will equip the skilled vocational worker to give what he knows to his students with maximum efficiency and greatest economy in time, with the least amount of waste energy and waste of tax collected monies.

The matter of preparing teachers for the vocational fields presents a number of problems some of which are difficult but possible of solution. It is necessary, however, to think constantly in terms of desirable objectives. A teacher-preparation program must first concentrate on the preparation of a man or woman for the task of leading young folks to a realization of the fullness of life and then stimulate in these young folks a desire for economic independence and proper social adjustment. The teaching of subject matter in any system of public schooling is essential, but the development of the individual into a self-reliant member of a community is paramount. What instruction a teacher gives in a classroom is incidental to the influence which the teacher exerts in bringing about the acceptable aims of education.

The basic-professional preparation for the vocational teacher must be defined in terms first of that preparation which is desirable for *all* teachers; and secondly, that preparation which is desirable for the vocational teacher. Vocational teachers have been classified in the following sub-divisions; agriculture, trade, home economics, and industrial. In the matter of providing basic- professional preparation for each group, courses may be conveniently classified as follows: professional, content, and professionalized subject-matter courses. Professional courses are those which have to do with the art and science of teaching and included within this group are certain fundamental courses which every teacher, irrespective of the subject which he teaches, should be obliged to take. Introduction to teaching, educational psychology, educational sociology, history of education, organization of subject-matter, technique of teaching, etc., are classified. Subject-matter courses are for convenience sake, included under content courses such as social studies, mathematics, sciences, and are offered with the aim of securing greater mastery of content material.

Professionalized subject matter courses emphasize both the content and the professional aspects in the same course and every subject taught is coordinated and arranged with reference to the fundamental purposes of public school education. Some hold that any course that does not carry an actual or a potential increment of functional service for a prospective teacher cannot be justified in a teacher-preparation curriculum. In other words, scholarship and culture are to be attained through the realization of a vocational purpose and not through general knowledge. The purpose of basic professional courses is the same whether they are given as isolated extension courses, correspondence courses, or resident courses within a regularly defined curriculum for the preparation of vocational teachers. Approved institutions should offer a preparation, usually, although not necessarily, interpreted in terms of four years based upon a four year high school education.

This training need not be pre-preparation for service, but should be completed in small increments of preparation combining both pre-service and in-service courses.

Although it has been the practice in the Commonwealth of Pennsylvania to accept trade experience in lieu of elementary and high school preparation, this practice is soon to be discontinued. Trade experience from four to seven years will be insisted upon but in addition, adequate professional preparation will be required. The practice of accepting trade experience in lieu of schooling was initiated when trade teachers were difficult to secure, but since the compulsory school law has become operative and the general need for basic education as a pre-requisite for all types of social participation has been recognized, the industries are now urging both elementary and high school education as a pre-requisite for employment. If the trades themselves demand this standard of pre-preparation for a trade, is it not fair to insist on an adequate period of preparation beyond the high school, not only in further knowledge of the trade itself, but in a general academic background and a professional education for those who are to teach in all types of vocational schools? Trade experience is something different from high school education as high school education is different from trade experience. The two are not comparable and even in great emergencies such as scarcity of teachers in particular types of activities, it is questionable whether one should be accepted for the other. One should not compare college education to a prolonged trade experience or compare trade experience with a college education; the two are entirely unlike, without points of comparison. The trade teacher must have a prolonged trade experience to do his work well, but to interpret American public education to the future citizens, it is essential that in addition to this prolonged training, the aims of public schooling must be known to him in terms of its objectives and that, in addition to the ability to interpret American education to those who pay the bill, the teacher, whether he instructs in the subject of Greek or in the field of rural agriculture, in European History or in plumbing, must know the students in terms of the men and women which they are to become and know them in terms of the part they are to play in the civic, industrial, and home life of the adult.

To provide adequate opportunities for vocational-teachers the following types of preparation should be considered:

1. Extension courses.
2. Late afternoon, evening and Saturday classes.
3. Intensive summer courses.
4. Regular summer session courses.
5. Special conferences.
6. Correspondence courses.
7. Individual help on the job.

Except in large cities where it is convenient for vocational teachers to attend courses on the campus of an accredited teacher training institution, resident courses extending through a prolonged period from two to four years have not been found very satisfactory. This is not true, however, in the field of home economics or in agriculture where fully developed four-year curricula may be made available to those who desire to prepare themselves for teaching in either field. But in the field of industrial education where a young man enrolls in a four-year curriculum and spends this time continuously in the institutions it is seldom found to produce the best results. Resident curricula should be provided by the approved teacher preparation institutions, but open only to those skilled mechanics who can afford to spend this time in the institutions. It is fundamentally sounder to provide units of courses which may be completed by skilled craftsmen in one of the seven ways indicated above.

1. Where it is not possible for groups of teachers to attend resident courses in an accredited institution, the accredited institution should send its experienced teacher-trainers to such places either within the school district or distant from the city where a group of ten or more vocational teachers can conveniently meet. Courses so offered should consist of various units out of the State plan and focus on the ultimate completion of concurrent and sequential courses so organized as to lead to the completion of a curriculum which is necessary to successful teaching in a given field. The completion of these courses does not primarily provide a method by which a teacher may earn a degree or a diploma, nor should such a program be interpreted as a short cut to a college education. It does not necessarily relate to grades, semester hours, diplomas, or licenses to teach. In these extension courses emphasis should be placed on the program because it brings to the vocational teachers in service the benefits of a richer experience and a clearer and saner understanding of the teacher-problem. This preparation comes while the teacher is actually employed on the job.

Institutions approved for the preparation of vocational teachers must hold themselves ready to serve groups of vocational teachers within reasonable travel distance and where homogeneous groups can be conveniently brought together. Whether the extension class is held immediately following the school day session, in the evening, or on Saturday, the instructor must bear in mind the obligations involved. These extension courses are attended at a great sacrifice on the part of the teacher. Whatever message is brought must be stimulating, applicable and worthwhile. Wherever such extension work is of the right sort, specific professional improvement is made possible with a minimum of expense and energy on the part of both teacher and teacher-trainer. A careful study by the person charged with the formulation of the State Teacher Preparation Program of the area to be served will disclose local needs, and the courses offered can be made adaptable to serve such local needs. Not only can basic professional courses be brought to teachers who otherwise may not be in a position to profit by contacts with teacher-trainers in resident courses, but academic courses may be made available where there is inclination on the part of the skilled vocational worker to secure in addition to his basic professional preparation, the basic academic preparation expected of every fully prepared teacher and ultimately leading to his graduation from an accredited institution. The future vocational teachers will not only have competent trade experience of some seven or eight years including his apprenticeship, but he will have a high school education and a college education as well. The general attitude of craft-unions throughout the United States will bring about this standard, even though there be some of us who are not convinced that such a standard will be most beneficial for teachers in vocational fields.

It is desirable to maintain homogeneous groups of vocational teachers in the types of classes where basic preparation is offered. This plan is to be encouraged, although at the present time the inclusion within a group of vocational teachers of a negligible number of non-vocational students, may give an interesting balance to a class and will challenge the ideals of both groups. But it should be borne in mind that aside from this, the specific preparation is defined for vocational teachers.

Teacher training courses offered through extension should be made available where it is accessible to those who need to be trained. In small states the training may be given by representatives of the state office. In such cases there appears to be established a close correlation between supervision of teacher training and a fixed responsibility for the result. Under this plan there is a guarantee that the State Department policies will be carried out. If the state is large and it is difficult or uneconomical to work out from one center, a modification of this plan is advisable. In Pennsylvania three institutions are designated for the

purpose of carrying out the vocational teacher training program. The budgets of these three institutions are directly controlled by the Department of Public Instruction. The vocational teacher training program is approved by both the officials responsible for general teacher training and those responsible for the maintenance of adequate vocational standards in the state. Periodic checks are made both in the field and in the institutions on the efficiency of the program. It would be uneconomical for a large state to try to conduct its vocational teacher training from one center. Therefore, we have divided the state into three sections; eastern, western, and central, each of which is served by one of the approved institutions. One institution centrally located maintains a large School of Agriculture; it is charged with the responsibility of preparing teachers of agriculture and of maintaining an in-service continuing teacher-education program. The vocational teacher training staff in agriculture offers an approved four-year curriculum for the preparation of such teachers and the curriculum is so arranged as to give to the undergraduates a thorough fundamental training in technical agriculture with sufficient amount of professional courses to enable him to organize and present his agricultural information. All new teachers are followed up with a program of in-service training during the first year of teaching. There is close cooperation between the instructional staff of the college, the teacher-training agency and the Vocational Bureau of the Department of Public Instruction.

In addition to the field of vocational agriculture, Pennsylvania State College offers both resident and extension courses in industrial education. The staff of this division serves its area wherever the demand indicates the desirability of establishing courses. The instructors concentrate intensively on teacher-training-service. They are regularly appointed members of the college staff and are subject to the policies and regulations obtaining in them. They are administratively responsible to the State Department of Public Instruction which approved the budgets and curricula.

In the field of vocational home economics, State College, University of Pennsylvania and the University of Pittsburgh offer full four year curricula as pre-service training and in addition provide extension courses in a similar manner described above. All persons engaged in this program must have the basic vocational experience that will guarantee proper orientation for the work.

2. Where it is possible to enroll vocational teachers in late afternoon, evening, or Saturday classes in an accredited institution in courses offered on the Campus, particularly in the industrial field, there is a tendency to break down the so-called abhorence for an academic atmosphere and the tendency is to destroy entirely an unwarranted inferiority complex. Competent mechanics employed in teaching shop work will cultivate a desire for personal contacts with fellow teachers, and they will be made to recognize the value of practical experience which when supplemented with a broader education, makes them more valuable to the school district in which they are employed. Their interests are aroused in related fields and they become more convinced than ever of the profoundness of their work; a new world opens before them and the learning of a trade takes on a new significance.

3. Intensive summer courses are helpful in providing an opportunity for the basic professional preparation for vocational teachers. Such programs may be conducted from one to four weeks duration and should cover the entire day. These short and intensive courses have proven more satisfactory where teachers are involved who might not be able to attend extension or resident types of teacher-training programs. They are not very effective in producing a lasting result. These intensive courses do, however, permit an inter-change of ideas and the fraternizing of teachers from an area which on the whole has a tendency to move forward a professional program. Good results follow when specific problems are considered. Whatever courses are offered in these intensive programs, they should be of the same high quality and standard of both resident or extension courses and should bring to the teachers enrolled whatever recognition is extended for any other course completed in the State program.

4. Regular summer school courses permit the organization of homogeneous groups of vocational teachers. Uncontrolled mixed enrollments in such classes tend to minimize the vocational aspect of the course provided and should be carefully guarded against. Where definite groups of vocational teachers can be so organized, there is offered an excellent opportunity to develop a professional spirit among the vocational teachers from various places within the State. But it will be possible to do certain types of professional teacher training work only where these groups are homogeneous. Summer school courses are not designed for evening school teachers but primarily for all-day teachers. Recreational opportunities as well as opportunities for professional improvement should be part of approved summer school courses.

Faculties for the purpose of offering summer school courses should be recruited largely from experienced vocational teachers who bring a stimulating influence direct from the field. The best available instructors may be recruited for this purpose. Not only does the personality of such a faculty act as a magnet for vocational teachers, but also has a wholesome effect on the resident faculty engaged in vocational teacher training.

5. It has been found very helpful to develop special conferences for the purpose of promoting intelligent thinking along specific problems involved in vocational teacher-preparation. Leadership in these professional conferences should be assumed by those responsible for teacher-preparation in their service area. Staff members of the State Department must cooperate to make these meetings fruitful. These conferences should be held both regionally and at a central place. While there may be a tendency to provide speakers of a general character at such conferences, the general policy should be to place some one in charge of the conference who will act rather as a chairman of the group, permitting vocational teachers in attendance to express themselves as active participating members in the conference. When properly guided such conferences provide an opportunity for an inter-change of ideas, a chance to disclose intricate problems, and the worth-whileness of basic teacher-preparation programs. The presiding officer must see to it that every member actively participates in the discussion, and where such conferences are carried on by experienced leaders with a group of homogeneous teachers together with adequate follow up work, such conferences can be a tremendous assistance in providing basic-preparation for vocational teachers.

6. There may still be a need to reach the individual teacher in the vocational field who can neither attend an extension class, a resident class, a summer session, or evening courses. The correspondence courses have been developed for this purpose. Considerable doubt exists in the minds of those in charge of teacher-preparation programs as to the value of this type of service, although the fault may be with the administration of such courses rather than with the courses. The use of correspondence courses should not be encouraged by accredited institutions except as a last resort.

7. There still remains the matter of giving individual help to the teachers on the job. This is not conceived as a function of a teacher-preparation institution because of the many difficulties involved in the successful administration of such a plan. The local superintendent of schools, who is the agent of the Board of Education and is responsible for educational policy, must possess clear cut lines of responsibility; while agencies not directly responsible

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INDUSTRIAL EDUCATION

Do You Have a Question?

(Is it worth a dollar?)

THE QUESTION BOX

PROBLEM 1

Problem 1—"John is a bright boy. He does his work well and finishes ahead of his class on all projects. Should I advance John to the project next above in line of difficulty or should I allow him to digress in his extra time into phases of his field which tend to have a broadening cultural value?"

Address The News Bulletin Editor, Room 225 State House, Indianapolis, Indiana.

$5.00 will be paid for the best answer received by March 15.

Do You Have an Answer?

(It may pay you)

THE CONFERENCE METHOD OF TRAINING FOREMEN

By G. A. Holmes

Supervisory Training Department, Western Electric Company, Chicago, Ill.

Why should a foreman be trained? A foreman friend of mine recently told me that all this foreman training business was "the bunk." He said that in his opinion a man who has had the hard work and hard knocks, and experience, of rising to the position of foreman has all the training he'll ever need. And I have heard men of much higher executive rank assert that training foremen was too impractical to be anything other than a waste of time. While we can sympathize with the justice of my friend's attitude and can recognize the fact that some foreman training has been slightly impractical, perhaps, we must admit that there are certain positive and progressive demands placed upon foremen by industry which make imperative some system of individual training and development if they are to keep abreast with the rapid progress all around them.

As we enter into a discussion of a particular method of training foremen, it might be well for us to have in the background of our thinking some of these reasons why such training is necessary. In the first place, industry or business demands trained leaders. Owen D. Young states: "The biggest problem of business today is to get hold of men who will stand the gaff of leadership." Because of the size and complexity of our modern business structures and because each major industry presents an entire field of learning in itself different from any other, most of these leaders must be developed from within the ranks of their chosen field. The man who is to accept the position of leadership in a modern business enterprise must know that business "from the ground up." This means some years of actual experience on the job during which time his natural qualities of leadership must be tested by real application and developed to accept greater responsibility. This development cannot be left to chance. Some systematic scheme of training must be introduced. The rapid spread of foremanship training in one form or another, during the past decade, is one way in which industry is trying to solve the problem so strikingly stated by Mr. Young.

In the second place, if we can regard the foreman in his managerial capacity, we find that there are increasingly greater demands placed upon him for sounder managerial ability. Business competition has never been keener. Oftentimes the success or failure of a manufacturing business depends upon the economy with which the commodity is produced. Our typically American genius in industry has been directed largely, in this era of mass production, to cutting the cost of production. To the foreman, as the last representative of management on the firing line, is handed the responsibility of getting out the desired quality of product at the lowest possible cost. Judging by the responsibilities given him he is supposed to have in happy combination the mechanical skill and aptitude of an Edison, the statesmanship of a Benjamin Franklin, the leadership abilities of Charles Schwab, the teaching patience of Dr. Elliot, and the accounting knowledge of a correspondence school graduate. With a large investment under his control in machinery, power, material, and labor he is supposed to produce goods at the lowest possible cost by the most efficient handling of men, by the most accurate job analysis, by the proper maintenance and utilization of machinery, and by a constant improvement in methods of handling tools and equipment.

The point of greatest emphasis at the Chicago meeting of the National Management Congress last April was that the management is to blame for the waste in American industry and commerce today. Mr. Palmer of the Eastman Kodak Company, quoting from the Hoover waste report, stated that 50 per cent of the responsibility for waste is placed on management. This statement was strongly endorsed by Mr. H. P. Kendall, President of the Taylor Society, who added: "The increased size of corporate units especially necessitates intelligent control. The most insiduous evil in business today is muddy unfocused thinking on the part of the management."

Now all these facts can mean but one thing, namely, that to the extent with which the foreman is charged with managerial responsibilities he must be trained to discharge them creditably and effectively. The standards by which he is judged are going up and up, which is but another way of saying that with the foreman, as with any successful business man, education is a lifetime proposition.

As a final thought in this immediate connection we must note the intensely strategic importance of the foreman's position. By the natural divisions of work in industry, the operating groups of employees are divided into units of from 1 to 1000 reporting to the foreman. These employees represent the real backbone of the physical element of production. They do the work. They represent the greatest investment in actual cash outlay. The more willing and loyally their constructive energies can be brought to bear on the task at hand, the greater will be the success

of industry. None but the blind dispute the importance of the relationship that exists between this working force and the management, but there are many who refuse to see that the foreman, standing as he does between the two —the agent of both—must be a man in whom character and ability are of tremendous importance. To the working man, the foreman is the Company, and the Company is fair, square, good or bad, to the extent with which the foreman carries those qualities into his work relationships. If that foreman is stupid, arrogant, deceitful, or unfair, then a Company may expect its most enlightened policies of employee relations to fall on barren soil. Through him the Company standards of labor relations must sift. At the same time he is the stethescope by which the management can sense the pulse of its vital working organs. He is just as much a representative of the working force as he is of management, and it is expected that he champion their cause with dignity, tact, and fairness to all concerned. He is responsible, too, through his knowledge of how to handle men, for the success or failure of many men on their daily jobs. If the foreman is a part of management, and if management is eventually to become a real science, as it is fast doing, *then he, the foreman, must add to his economic usefulness, as must also management, the proven ability to contribute to the development of human individuality and character.* And this, I am sure you will agree with me, demands some training.

But, while it is fairly obvious that some kind of foreman training is necessary, it is not quite so easy to select the method by which such training may be best accomplished. That particular method which will suit one industry or one set of conditions might not be adapted to another at all. In the earlier stages of the development of foremen training courses it was not uncommon at all for speakers at conventions and authors of papers or books revealing the particular success of the method they had used in any given business to have these ideas swallowed without tasting and applied bodily to some other industry. Fortunately we have reached the period now where most industries are developing a type and method of foremen training which is based on their own conditions and problems.

At the present time there are more than fifty different types of programs in use, ranging all the way from the straight lecture method, through various graduations of the conference method, to the text-study method, with many combinations and offshoots of all three.

In excluding these other methods of training from this discussion because of limited time it must not be interpreted to mean that they are less or more valuable. On the contrary, I believe that any attempt to conduct a course of foremen training by the exclusive use of one method or one plan for training will result in failure.

The conference method, however, presents a strange paradox. It is at one time the most commonly used, the least understood, the most abused, and withall the most powerful training medium. It is the oldest new method we have. Socrates was the first conference leader, and founder of the conference method. Notwithstanding our material and mechanical progress of today, it can be seriously doubted whether we have improved upon his technique. It is a most hopeful sign, however, that industrial and educational institutions alike have been rapidly recognizing, during the past decade, that man's intellect and conduct is best improved by rousing him to reflection and leaning him toward self-knowledge. Thus do we return to an era of thinking originated 2500 years ago.

But just (1) What is the conference method? (2) Why is it adapted to training foremen? (3) What are its advantages as a thinking process? (4) What does it mean to industry? (5) What is its vocational significance? These are the questions to which we should cooperatively seek an answer in this discussion.

In its unadulterated sense, a conference is an appointed meeting of people for the purpose of deliberating, analyzing, and discussing a matter of mutual interest in order that each may both give and receive counsel from all others. The "method" might be defined as the process or line of attack by which the experiences, wisdom, and expressed thoughts of each individual are drawn out, weighed, and integrated with the experiences, thought, etc., of all others in the group to form an acceptable solution to a recognized difficulty. It is a process of drawing out rather than pumping in; of analysis and reflection rather than absorption and retentiveness. It is the leader's job not so much to dogmatize, assert, or impart information as it is to elicit, suggest, and open up all avenues of approach to the problem.

In actual practice, however, there are many different uses and variations from its pure form. General Motors, maintaining one of the largest industrial training plans conducts foremanship training on a conference basis with the subject material prepared and distributed one week in advance. This enables every member of the group to consider in advance the point to be discussed at each session. General Electric uses a similar method. The New Orleans Public Service Company follows the case method, by which definite illustrations or experiences on the job are used to develop the subject for group discussion. No text material is used. Minutes are kept of the meetings, and when each subject is finished these minutes are summarized, printed, and distributed in binders to each group member. The Northern Indiana Public Service Company provides a course arranged around ten major sections requiring four or five conferences for each section. The Subject is usually announced in advance, sometimes accompanied by a few questions to stimulate thought on the subject. At the time of the meeting the leader outlines the scope of the subject and its bearing on the supervisors' work. He then proceeds with the conference method of drawing from each member his point of view and practice. He keeps his views in the background as much as possible and takes part principally to guide the discussion toward a satisfactory solution to the problem.

As one might expect, methods of approach, plans, and subject material vary according to the needs of a given industry and the ideas of those conducting the training work.

For other reasons than variety, however, the conference method, as a vehicle of training, is well adapted to certain needs of industry as well as of foremen. Any type of training that is to serve industry must be practical. It must concern itself with industry's problems — problems of production, waste elimination, labor turnover, cost reduction, employee relations, service to the public, safety and health of the worker, and a score of others. It must present these problems in terms of each particular industry's experience. You could step from a conference in a steel mill on "Waste Elimination" to a conference in a cotton mill on the same subject and hardly recognize it. The manifestations of the problem and factors entering into its solution would be altogether different. It must have interest appeal to the men who are to translate such training into increased personal abilities and more efficient work procedure. It must be anything but "bookish" with ideas far remote from the actual routines and problems of the day's work. It must secure finally the desired results through as little study as possible, for the foreman is a busy man with little time for home study, and scarcely more upon a job already jammed with activity.

That the conference method meets these needs quite well is readily recognized. Its flexibility allows subject material to be chosen that meets local conditions. Since the conference members themselves create the discussion it is found to be within their range of experience and on their level of think-

ing. By the very process of the conference, too, interest can be kept at a maximum through the constant testing of ideas, the matching of mental skills, the thrill of participating in creative thought, and the struggle for self-expression with its consequent glow of satisfaction when achieved. These are vital factors in any training process and their ease of realization through the conference method gives this method a strong bid for perfect adaptability to the needs of industry.

Leaving for a moment the thought of its applicability to the needs of industry, let us consider some of the advantages of the conference method as a thinking process as well as in its effect upon the individual.

From the standpoint of the individual we must take into consideration certain modern tendencies of group control of human enterprises. The theory of man's individual control over the affairs of life has undergone a rapid transformation. Where nations were once ruled with iron hand by czar, king, or emperor, they are now governed by groups of men working in cooperation at the will of the majority. Where the commerce and business of the world was once conducted by individuals, it is now guided by boards of directors, committees, and conferences. The "Captain of Industry" and the "Wizard of Finance" have given way to the interlocking directorate and employee owner.

Who rules the United Fruit Company with its 320,000 stockholders, or the American Telephone and Telegraph Company with its 500,000 owners, 100,000 of whom work for the business they partially own? No one man, you may be sure, but many working together in groups. Student government in the schools, employee representation in the factory, board of trustees in the church, administrative committee in the club, and a board of directors for this, that, and the other are all indicative of this great change from individual to group control.

This situation makes it possible for the individual to have his influence count for more today than it has ever done before, but that influence must make itself felt through group activity. *To the extent that any individual can learn to sit down, think together and work together with a group, mold the forces of thought contained therein to a common ideal and so express that ideal as to influence the conduct of the group—then to that extent is he building for genuine leadership.* And there is no man so humble that he doesn't have opportunities to serve and to make his presence felt in some group in which he moves. Around us all are a score of business, social, political, religious, fraternal, literary, or service organizations which offer to us at any time a chance to make our influence really count for something.

Failure to take advantage of these opportunities for the development of leadership, and the consequent loss of unused talent which should be enlisted in the formation of policies, constitutes now one of the greatest wastes of industry.

Thousands of men and women who today are sitting silent, frustrated and shut-in, feeling keenly the despair of lost opportunity and the hopelessness of ambition, can, with such training and a little effort, find their voices and assume their real places as contributors to the economic or social progress of their own individual circles.

But an opportunity to find his voice, to express himself, and to take an active part in managing the affairs of men is not the only advantage offered to the individual who makes correct use of the conference method. He has placed at his disposal a fund of knowledge, wisdom, and experiences that he could get in no other way. Each member of the conference may have from thirty to sixty years of living which in meaning and content cannot be equalled by any one else. This great reservoir of knowledge can be tapped at will if each conference member is actuated by a spirit based on sincereity of purpose, earnestness of will, openmindedness, and a desire to both give and accept the best, yielding when yielding should be done, with full confidence in the equal sincerity of others.

And what is equally important he learns to modify his prejudices and half-baked convictions with the opinions of others, and to seek the answer to a problem which, while it may not suit him as an individual, he will accept because it is to the best interests of the group in which he belongs. And this is the essence both of cooperative living and good citizenship.

For fear that I may have overreached myself in stating the significance of the conference method to the individual participant, I wish to quote here a few of the exact words from some of my foremen friends.

"The old saying 'Experience is the best teacher' doesn't tell all," said a veteran Foreman to me the other day. "From our conferences I am able to add on to my knowledge what Bill Jones and Tom White know from their Western Electric experiences. Yes, and maybe I can learn something from that young fellow Tom Swift, too. He has only been here two years but he told us something the other day that was new to me."

Another Foreman said to me, "You see, the practice I get in the conferences gives me nerve that I didn't have before. I put out my ideas now and the boss likes that, too." Who can measure the value to this man of his new-found self-confidence?

A third Foreman has noted almost the same thing when he said, "I've noticed that the fellows around here who can step right up and say what's on their minds are the lads that get ahead. We supervisors get a wonderful chance to learn that by practicing in our conferences. We all profit from that, and it is a cinch that we can use some of what we hear from the other fellows."

The following comment clearly indicates one of the high marks of a true conference procedure.

"Do you know that up to the present time I was rather skeptical as to the purposes of these conferences; that is, I felt they were being held only for the Company's good and that the conference leaders were actually instructed on the points which the Company wanted to put across. After this morning's meeting I felt that every man in there was actually contributing to the program, and I sure got many good pointers from this conference."

But in spite of these valued influences on the individual, the conference as a method of thinking, or of formulating policies, or of solving problems is subject to distrust in many quarters. There are those who hold that the best type of thinking is that done by an expert mind and that the time of the group should be spent in listening to the thinking-soloist, in absorbing and retaining as much as possible of what he says, and in securing a group endorsement to his thought. In this event the prime qualifications of the conference body would be the same as those of a sponge-absorption and retentiveness. Others suspect the conference group of being susceptible to the vagaries and whims of "mob psychology" and hence incapable of reaching a logical decision. Still others feel that the conference method takes too much time and does not have the facilities at its disposal for accurate reflection and judgment. Each of these objections has an element of truth in it, the weight of which is in inverse ratio to the ability of a group to actually use the conference procedure effectively.

But the positive and constructive advantages of the conference method as a thinking process and as a method of formulating policies to be subsequently put into action by the group far outweigh the difficulties of achievement. Let us examine *three* of these advantages briefly.

The first is found in an examination of the thought process itself. Any logical thought process, whether by an individual or a group, runs through a definite cycle of at least three steps. First, a problem is raised by some disturbing facts. Second, some ideas suggest themselves as possible keys to the situation. Third, these ideas and their leadings are developed and ex-

plored, perhaps ending in a fourth step. Fourth, formation of opinion or conclusion. In the second and third stage of this thought process, the essential thing is that a variety of promising ideas shall come to light. It would be logical to assume that the more brains there were at work the greater the number of ideas developed. It works that way in our business. The more raw material in process the greater the quantity of piece parts. *In making these steps, conference thinking has a distinct advantage over individual thinking in that it has a greatly extended range of mental associations.* The whole thinking process, too, will get in a group the constant testing of ideas by the very atmosphere of the discussion which is quite lacking in the individual thinking process. Obviously, then, the validity of the fourth step or conclusion will be greatly enhanced by such a method.

A second advantage lies in the fundamental nature of group assent. Group assent, feeling, or decision regarding any given problem may be passive or it may be active. If the conclusion or answer to a problem has been reached beforehand and is presented to the group merely for formal discussion and acceptance, the assent will be passive. But if the solution to a problem or a proposed course of action is really to mean anything, it must have more than the passive assent of the group concerned; it must take up into itself some of the emotional and intellectual forces represented in the different personalities of that group. Those individuals must have a part in reaching that conclusion in order to give active assent. And active assent is necessary before the vital energies of men can be released for constructive effort. In other words, the solution to any given problem involving group conduct by individuals can be carried most effectively into action when that solution is reached by the cooperative thinking of those who are to carry it into effect.

Evidences of the truth of this principle of group conduct confront us almost daily. Only a short while ago I was discussing with a group of foremen the problem of "lay off" in industry. The question arose as to whether married women should be laid off work or not. In the beginning of the discussion nearly all members said "yes;" but as the discussion proceeded it was revealed that some married women are widows, the sole support of their children, that some had husbands who had been laid off earlier in the depression leaving the wife the only wage earner in the family, and that some were extremely efficient employees of many years' service. As a result of this "thinking through" process, instead of feeling that a blanket order should be issued "laying off" all married women, the group came to feel that each individual case would have to be handled on its merits. The possible results in injustice, suffering and hard feelings of any short cut method of solving this problem are obvious. I have found this principle works equally well in the home, too, where three or four children have to have their individualistic tendencies subordinated to some kind of harmonious family life, and I heartily recommend it to any harassed father who is seeking a sounder, if not more forceful, way of keeping Mary, John, and Bill in line.

And yet a third advantage of the conference method lies in its power as a stimulant. I do not mean to infer by this that the conference method is a solution to the prohibition problem. But what I do mean to infer is that one of the big problems of industrial education, the same as in all learning, is to get men to think; and that any method which actually sets men thinking about themselves in relationship to the ebb and flow of life about them is worth whatever effort it may cost. The difficulty with many industrial executives as with many classroom teachers is that whenever they step before a group of their subordinates, or pupils, they feel constrained to tell the group meeting, teach them something, or drive them to do something. Such folks could more appropriately sit back, listen and learn something. They should know that if the thinking of any group is to be done for it by semi-official experts, or by men whose thinking cannot be questioned because they hold certain positions of authority, then no one in that group will feel responsible for the truth or accuracy of the thinking that has been done. Where there is no responsibility or need for original thought, there can be no creative thinking; and resourcefulness in suggestions and ideas is dead. The current indictment against our educational, industrial and political regime is that too long has our policy been "Understand what is said and do what you are told."

In a good conference, however, each new item of thought is carefully analyzed and graded, accepted, withdrawn, or held in reserve as it is injected into the discussion. Like the ball in a game of tennis, each thought bounds quickly from player to player, receiving a cut here and a slice there and a lob from the man over in the corner; and every man is mentally alert, with eye on the ball, ready to "put over a fast one" in this new game that he is playing.

"But what does this method of training actually mean to industry?" you ask me. What its full meaning is no one can tell as yet, since the infant is scarcely ten years old and has just begun to cut its wisdom teeth. However, certain trends are visible.

(1) We can note a distinct change in industrial perspective. The individual worker, his growth and status, have never been so near the center of attention as they are today. Industry is seeing that education should serve more than just the economic purpose of enabling an individual to make a better living, but that it should serve likewise to make of man a socially stabilized being, bringing him into harmony with the social institutions about him and rendering him capable of contributing to those institutions in a positive and constructive manner; and yet again that it should serve to make of him a reasonably happy and well adjusted individual, better able to maintain satisfactory balance in the face of the perplexing and baffling factors with which industrial and social progress has surrounded him. The conference medium is but one of the resultant opportunities for the individual workman to lift his voice and assume a vital role in the conduct of affairs around him with its concomitant of self-unfolding and self-extension.

(2) Industry is coming to feel that if its working objectives are to be realized, it can only be done through the explicit understanding, allegiance, and vitalized activity of its employees. Any industrial objective to be permanently satisfactory must be conceived in or reconciled with the natural desires, impulses and satisfactions which its workers normally seek to express. To the extent, then, with which any business can use the conference method either to formulate new policies or to seek a meeting and harmonizing of minds on old policies, to that extent will those policies be assured of most careful enactment.

(3) Industry is recognizing the necessity of training not alone for individual skill, but for wholesome group membership and activity. The emphasis in industry today is not training for narrow job efficiency alone, but rather training for total personality development in relationship to human effectiveness and influence on other people. E. W. Barnhart of the Federal Board for Vocational Education speaking before the Illinois Vocational Association Convention in Chicago, November 7th, said that now-a-days employees are fired not so much for lack of skill as for lack of ability to get along with other people. This same tendency was noted by the Bureau of Vocational Guidance at Harvard University which recently made a study of why men lose their jobs. According to Dr. J. M. Brewer, Director of the Bureau, only one-third of the workers in various occupations lost their jobs because they lacked skill or technical knowledge.

The balance were discharged because they lacked social understanding or the knowledge of how to get along with other people.

Industry then must choose the larger aim of making employees alive to the possibilities of self-growth and self-achievement not alone through skill, but through points of view, new attitudes, new methods of dealing with other people, new feelings toward work, and the sharing of life's experiences with others.

At this point I think it should be noted that when industry undertakes the conference method of training it must write on a clean slate. *If the aim is merely to increase production at less expense to the company, or if the top executives do not include themselves in any program of self-improvement, or if management is not sincerely interested in the happiness and well-being of every employee, then sooner or later the training program is doomed to failure.*

In concluding this discussion, I think it would be fitting, in view of the general aims of this convention, for us to ask whether or not this method of training which I have been discussing has any vocational significance. I believe that it has. Industry's acceptance of this method, I conceive first of all, to be a tribute to those of you in the educational world who have been telling us for a long time that true learning comes only by doing. By our joint experiments and thinking we have expanded that idea to one: That learning is a continuous process of acquiring ability (not just skill and technical knowledge) to meet the concrete situations of life in an intellectually and emotionally effective way.

If we are to train foremen to become occupationally successful, then, our training must proceed along the lines of the most enlightened vocational approach which seems to be: (1) Choice of suitable life work. (2) adequate initial preparations for it, (3) unceasing effort and adaptability to the ever changing conditions of life. Obviously, industry's efforts must concentrate on the last avenue of approach. Mr. C. A. Fulmer, Department of Vocational Education of Nebraska, tells us that the world measures a man by his social and vocational efficiency. If social efficiency means living as well as making a living; if it means personal unfolding and development with relationship to one's contribution to his fellows; if it means assuming and discharging satisfactorily one's duties and responsibilities of daily life in terms of human relationship, then I conceive this method of training to be one of the most effective vocational instruments at industry's command.

EXAMPLES OF SCHOOL TRAINING FOR UNSKILLED AND SEMI-SKILLED WORK IN A SPECIALIZED SCHOOL

By R. O. Small

Deputy Commissioner of Education, Boston, Mass.

The earliest accounts of human endeavors inform us that the question of footwear has always been a troublesome one. The problem of supplying clothes was readily answered, but how to cover such an irregular part of the body as the foot, and still have the covering of such material as would withstand the elements of wear, was not so easily met. The people first resorted to skins wound round the foot and bound at the ankle. Gradually the sandal was developed, and the Romans made it a real work of art and covering for the foot. The glory of Rome may be attributed, in part at least, to the success they had in developing the hob-nail sandal for their soldiers.

The history of the shoe has been closely interwoven with man's romance, warfare and worship, and it would indeed be unnatural if such an industry should be without its patron saint. Hence, we find in the annals of history accounts of Saints Crispan and Crispianus, who were exiled from Rome in the 4th Century, and journeyed to France, where they preached the gospel and earned their livelihood by making shoes. However, France was not ripe for their teachings and they were executed at Soissons on October 25th.

History of American Shoemaking

The history of American shoemaking runs parallel to the history of the nation. Thomas Beard, a shoemaker, came over on the second trip of the Mayflower in 1629 and started to ply his trade at Salem, Mass. Philip Kirtland settled in Lynn around 1735 and sowed the seed of the industry which has caused Lynn to be called the "Mother of American Shoemaking." The custom in this day was for the shoemaker to travel from house to house and make shoes to order from home-tanned leather. Foreign competition seemed destined to stifle the infant industry, until in 1789 Ebenezer Breed, a Lynn boy, succeeded in having Congress pass a protective tariff.

About this time the apprentice system was inaugurated. By this system the boys were bound out for several years to their master to learn their trade. They learned all that the masters knew of the trade and then returned to their home towns and opened factories of their own. Many of these boys became leaders in their trades.

1815 ushered in the inventive age of the shoe industry, and since that time, rapid strides have been made in the invention of shoe machinery. So highly have these machines been developed that today we have nearly 170 machine operations in the factory besides some 30 or 40 hand operations. The shoe which was once made by one pair of hands today sometimes passes through 210 pairs of hands.

There are today over 300 different types of shoe machines and this increased number has so developed specialists that there are very few men who ever get the opportunity to become even slightly acquainted with them all.

The idea of the Lynn Independent Industrial Shoemaking School is not novel, but is simply the idea of apprenticeship modernized. In the old days the boys spent years with a master of the trade and became masters themselves. Today students may obtain a better training in much shorter periods of time on better equipment and thus be better fitted to enter the industry.

Subject to the statutory requirements, the day school is free and open to residents of Lynn and Massachusetts, over 14 years of age, who are able to satisfy those in charge of the school, of their ability to undertake the training.

Pupils may enter the school at any time during the school year and will be retained if, within a reasonable time, they show ability to profit by the training.

There will be no promotion by classes and no fixed time for promotion, but the general schedule of studies will be adhered to as closely as possible. There is a tuition charge for non-residents. This charge is fixed by the State Board of Education and is at present $200.00 per year for day school, and $.25 per hour for evening school.

General Theme of Organization

This school offers:

(1) A two year course for girls, consisting of training in the Fitting Department, including actual work on Closing, Staying, Lining Making, Perforating, Tip Stitching, Fancy Stitching, Pump Stitching, Top Stitching, Binding, Eye-letting, Vamping and supervision of the department; also training in the Packing Department to include Lacing, Buttoning, Stamping, Tip Fixing, Vamp Repairing, Inspecting and supervision of the department.

(2) A two year course for boys, consisting of training in the Cutting Department, to include actual work on Cutting, Trimming, Linings, Outsides, Sorting of Stock and Putting up Jobs; also training in the

Upper Leather Fitting Department, to include Closing, Staying, Lining, Making, Perforating, Tip Stitching, Fancy Stitching, Pump Stitching, Top Stitching, Binding, Eye-letting, Vamping and supervision of the department.

(3) A two year course for boys, consisting of actual work in (1) the Sole Leather Department, in Sole Rounding, Channeling, Molding Shoes, Making of Gem and Economy Innersoles, Sole Sorting and all kinds of Bench Work; (2) Lasting Department, to include Assembling, Hand Pulling, Hand Lasting, Operating of Assembling, Pulling Over, Niggerhead and Bed Machines; (3) Making Department, to include Welting, Rough Rounding, Goodyear and McKay Stitching, Goodyear and McKay Leveling, Heeling, Shaving, Scouring, Breasting, Slugging, Edge Trimming, Edge Setting, Buffing and Naumkeaging, Heel and Button Finishing; (4) Packing Department, to include Lacing, Buttoning, Stamping, Tip Fixing, Vamp Repairing, Inspecting and supervision of the department.

(4) A four year course for boys, to include all the above. Each school year is one of forty weeks, five days a week, seven hours per day.

The school is divided into the following departments:

Cutting	Sole Fastening
Fitting	Heeling
Sole Leather	Edgemaking
Lasting	Bottom Finishing
	Packing

The course of instruction is intended to give the students a thorough knowledge of the shoe industry and, so far as possible, to fit them for positions as workmen on the different machines and, if they have the ability, to qualify later as shoe factory executives, salesmen, etc.

In addition to the above organized long term courses, the school offers short unit courses.

Activities of the Lynn Independent Industrial Shoemaking School

Change of program effective as of January 10, 1927.

Number of pupils accommodated during the year 1928-1929.

Regular Day School	451
Continuation	89
Total	540
Evening School	365

905 different individuals.

Combined efforts produced 15,503 pairs of shoes.

Number of pupils accommodated during the year 1929-1930.

Regular Day School	441
Continuation	113
Total	554
Evening School	442

996 different individuals.

Combined efforts produced 20,118 pairs of shoes.

Shoes sold in the market at an average price of $1.03 per pair.

Cost of materials and manufacture, an average of $1.17 per pair.

During the same period several hundred dollars worth of work in the form of contract stitching of uppers was performed.

Income from January 1, 1930 to November 30, 1930.

Sale of Product	$20,044.33
Continuation Tuition	638.55
Tuition	6,238.75
Smith-Hughes Fund	1,362.09
State Reimbursement	11,778.09
Miscellaneous	35.79
Total	$40,097.60

Budget, $53,000.00.

$13,902.40 local net cost.

Plus an estimated increase of $2,000 for Sale of Product and $500 for Tuition during the month of December 1930.

Budget estimate which amounted to $50,000 will have to be increased $3,000 making a total of $53,000 for the Year Jan. 1, to Dec. 31, 1930.

The total number of teachers employed is six in the Day School, plus three assistants.

The total number of Evening School teachers is eleven, six of whom are drawn from the industry for Evening School work only.

The average enrollment for the year 1926 and previous to Jan. 10, 1927 was twelve.

The contract stitching done for outside shoe factories in some cases is done better by the students at the school than is done in the factories where the operations are paid for.

The student body in the Day School, exclusive of Continuation School students is made up of about 30 per cent under 16 years of age and 70 per cent adults, or those over school age.

The courses now patronized are almost exclusively the "short term courses." When new machines and processes are being introduced into the industry, courses even as short as one week may be taken by some pupils.

Courses Offered

Day School

Cutting Department
1. Cloth and fabric cutting.
2. Leather trimming cutting.
3. Outside cutting.

Fitting Department
1. Table work.
2. Sample stitching and fitting.
3. Fancy stitching.
4. Skiving and pressing.
5. Binding.
6. Top and pump stitching
7. Vamping.

Stock Fitting Department

Making Department
1. McKay lasting and sole finishing.
2. Heeling.

Edge Making Department
1. Bottom finishing.
2. Packing.

Evening School
1. Same courses as in the day school with the addition of Pattern Drafting Course.

Up to January 1928, shoes produced at the school were McKays and Goodyear Welts. Those now being produced are women's and misses' McKays and Littleways. The Welt process is practically obsolete in this district.

No trouble is encountered in marketing the product and there are practically no damaged shoes,—not any more than would be expected in a producing factory.

The School on its reorganized basis has the support of the organized labor movement in this district as the President of a Local Joint Shoe Council was and is now a member of the Board of Trustees. Three members of the Board of Trustees are members of the Labor Union.

The law authorizing the creation of the school provides that "two representatives of the laboring classes" shall be on the Board at all times.

The Secretary of the local Shoe Manufacturers Association is also a member of the Board of Trustees.

The largest shoe making school in the world is now being conducted by the Soviet Government at Petrograd, Russia. More than 520 students of school age are enrolled as full time day school pupils at this school.

TRAINING WORKERS For SPECIALIZED OPERATIONS IN THE CARPET AND RUG INDUSTRY

By C. E. Hedden

Director of Training, Mohawk Carpet Mills

Amsterdam, N. Y.

Probably about the only interest this group has in the topic assigned me is of a purely "general information" nature. You are not in the slightest degree interested in the tedium of a detailed description of processes involved in the manufacture of carpets and rugs. In fact, I imagine that it is a matter of only very mild interest to most of you that one of the oldest industries on the earth has just within the past three years recognized the possible need for and value of training for its workers. Literally centuries before machines developed a demand for machinists and "builders" known as carpenters, masons or even plumbers, skilled weavers plied their trade in the manufacture of rugs, carpets and tapestries such as are still the admiration and despair of the Twentieth Century rug maker.

Since the first application of art to home decoration, artists have designed and craftsmen weavers have woven floor coverings which the present age attempts, with limited success, to copy. Why should this be? After all, a rug consists chiefly of wool, cotton and dyestuffs. Twentieth Century sheep and

Twentieth Century cotton are in no essential way different from Tenth Century sheep and Tenth Century cotton. In spite of the traditional claims of the superiority of vegetable dyestuffs, the modern chemist easily demonstrates the actual superiority of Twentieth Century aniline and chrome dyes. Does it follow then that the superiority lay in the superior skill of the craftsman weaver of the earlier centuries?

But, you say, the essential difference lies in the quality of handwork as compared with machine work; the handmade article of any product, if produced by a superior mechanic, usually embodying the distinctive characteristics of his individual skill which are entirely lacking in the uniform similarity of the machine-made product. Many comparative tests, however, have conclusively proven that improved quality as well as uniformity invariably result from refinements of mechanical operations and machine processes. Thus the machine age and mass production have, in the textile industry as in many others, created a demand for a machine-operating weaver to replace the skilled artisan hand weaver of the Guild and Craft age.

Being, as I have said, one of the oldest industries in the world, the carpet and rug weaving trade is weighed down with a mass of tradition barnacles so cumberson as to almost defy modernization. For example, unless a weaver can trace his original training to the Kidderminster, Firth or Templeton mills in England and Scotland he fails to quite establish himself in the fraternity of "Accepted and Approved weavers." No designer can command quite the same respect—or salary—or be accorded quite the same standing as the graduates of the South Kensington School of Art in London or the Glasgow Atheneum, Glasgow, Scotland. And probably the zenith of traditional inconsistency is found in the secrecy and mystery with which the traditional dyer surrounds his colorful art. Without apparently realizing the ease with which the modern analytical chemist discovers and reproduces in a few hours the exact formula and content of the combination passed down, in some cases, through three and four generations, we find the survivors of the old dyeing industry still struggling in their futile attempt to defend their tradition against the march of modern science.

And what of machinery? Here again we find the deadening influence of tradition. For example, one of the largest manufacturers of rug and carpet looms in this country continues to build looms with but little change in design over those produced a century ago. In an age when scarcely a bearing can be found in modern machinery without some form of anti-friction, roller or ball bearing, this company is still producing Axminster looms with only one of its large number of bearings thus equipped.

But what, you say, has all this to do with training for specific occupations in the rug and carpet industry? It has been my purpose in this sketchy review to indicate that a traditional, complacently self-satisfied industry employing men, machinery and materials presumably perfected centuries before many of our modern industries were born, has only during the past very few years awakened to the realization that a modernized, mechanized and reorganized industrial age challenges it to keep pace or drop out of the race. The economics of competition demanding modernized machinery, processing methods, management organization and a modern program for training workers in specialized operations to meet the requirements of quantity and quality in mass production.

The more I study and the more contact I have with and the more experience I get in organizing and conducting specific occupation or job training, the less mysterious and the more simple and unromantic it appears. Please note that I do not say the less interesting or stimulating or enjoyable it becomes. On the other hand, I continue to get an increasing kick and thrill out of every new successful training project put over.

But job training whether in the electrical, automobile, transportation, general textile or carpet and rug industries, or the machine or building trades resolves itself into about three or four simple units, than which little or nothing else is of significant importance. And these three or four units of procedure are the same that our friends, Allen, Cooley, Snedden & Co., enunciated long ago and which have never been materially changed since they were fundamental and fundamentals don't change.

Repeated in merely different words, these fundamental procedures are—

1. Select a small representative group of the very best and most efficient operatives in the job for which training is to be given.

2. In a series of conferences have this group make a complete detailed job analysis covering every operation required of the workers. Describe and explain to this group of prospective instructors the method of giving instruction on each item of the job analysis and the necessity of patient, helpful, thorough instruction insuring the fact that the trainee masters each unit before proceeding to the next. This is instructor training.

3. Organize and conduct the training instruction under such conditions as the nature of the work may make most effective.

4. Closely supervise the productive work of the trainees immediately following or applying the instruction given to prevent incorrect habits being formed through failure to correctly follow instructions.

It matters not what the industry or trade, or what the specialized operation therein, this simple procedure is, in my experience, all there is to job training. Applied to the rug and carpet industry, a single illustration will indicate my point.

After a rug has been woven and received its first shearing, Burling is the specialized job of inspecting the surface and back of the rug for the purpose of detecting and correcting any one or more of the twenty or thirty possible defects caused by errors in various manufacturing processes from the raw material to the finished rug.

From the nature of the work Burling is necessarily a handwork job. Since it applies to the finished product, it must be skillfully and neatly done. Presenting a wide variety in the nature and difficulty of the defects to be corrected, Burling should warrant careful and thorough training for the job.

A recent campaign for improved quality in the company I represent turned the spotlight on the Burling service in one of our major finishing departments and disclosed the fact that apparently careless, over hasty and unskillful Burling was a large contributing factor to the unacceptable quality of that particular portion of our product. Concluding that the Burlers were in need of training, the management turned the problem over to the Training Department.

Investigation quickly disclosed the fact that whatever training had been given to Burlers in the past had been of that usual fragmentary, unsystematic and utterly inadequate nature which results from the customary practice of "breaking in" new workers by placing them for an all too short time under the usually incompetent and disinterested instruction of an older worker who, having been trained in the same inadequate way, was unequipped in the first place to give effective instruction and, in the second place, because of being herself a piecework operator was naturally disinclined to sacrifice her own productive time to the instruction of a stranger in whom she had no personal interest. Thus a perpetual repetition of incomplete and ofttimes actually incorrect instruction had developed a department of some seventy Burlers less than twenty percent of whom, notwithstanding in some cases years of experience, could be rated as above

average and these rather by virtue of individual talent and skill than because of the training received. And may I here digress just a moment to say that this picture is, in my experience and opinion, so typical of industry as a whole where organized training has not been introduced, as to be practically representative of the "specialized operation" for which we are discussing "training" in this paper and again, irrespective of the field which the industry serves.

Applying our fundamentals mentioned above, we first, with the cooperation and assistance of the foreman, selected five of the best Burlers in the department who also appeared to possess those qualities of patience, human interest and thoroughness which would indicate a good prospective instructor. Six conferences of an hour and a half each with this group developed the job analysis shown as Appendix "A" and emphasized some of the fundamental elements of good teaching. We then selected ten recruits who knew absolutely nothing about Burling, giving two to each of the five instructors and so organizing the program that the training was done on regular production work but always in the sequence of progressive difficulty and time allotments set up in the job analysis. During the six week training period, frequent opportunity was given the trainees to apply their instruction on additional production work under the close supervision of the instructor to insure the forming of correct habits in performing the various types of repair.

And that is about all there is to it. At the end of six weeks these trainees went on regular piecework production and have frequently been pronounced by the foreman the best Burlers in his department. Needless to say, the training has been repeated with subsequent groups with similar success and approval.

One other outstanding value of this type of training is the use which may be made of the job analysis for up-grading training of workers. Each section foreman is given a copy of the job analysis and requested to rate the workers under his supervision on each unit operation included in the analysis. The result of this rating will usually indicate from one to three or four unit operations which each worker performs less effectively than the rest of the operations. Taking then the small group of workers who may be weak in operation No. 3, 7, 11, 16, etc., intensive instruction is given on each unit operation to the small group rated low in that particular unit with a resulting general up-grading of the productive efficiency of the entire department personnel.

An example of this type of "up-grading" training is illustrated in Appendix "B" of this paper. A job analysis was developed by four expert Axminster weavers. A rating sheet listing in the left-hand column the names of all the weavers in the department and with columns for the twelve weaving operation units was given each section foreman. On this sheet he checked opposite the name of each weaver, the one or more units in which that weaver was weak. Those checked in each column were then given intensive training in the unit or units in which they were less proficient with a resulting startling improvement in both the quantity and quality production of the department as a whole.

So simple, so logical and so easily within the understanding and ability of any intelligent foreman this type of training for specialized operations in any industry as well as the carpet industry would seem to recommend itself as the logical program to develop.

APPENDIX "A"

Job Analysis of Burling Operations—In the Order of Instructional Sequence

1. General Instructions.
2. Care of Tools and Equipment.
3. Needle Threading.
4. (Narrow) Folding Up.
   (Seamless) Running the Machine-treddle.
5. (Seamless) Rolling Up.
6. Locating and Repairing Defects.

Defects in order of difficulty	Time for first instruction
1. Knots	1 day
2. Ends Out	2 day
3. Wrong Color	2 day
4. Curly Yarn	1 day
5. Dropping Off	1 day
6. Shot Out On Back	½ day
7. Fine Chain End Out (On Back) (On Face)	1 day
8. Heavy Filling	1 day
9. Broken Shot on Face	1 day
10. Bad Edge	3 day
11. Skim Wire	2 day
12. Missed Wire	2 day
13. Lapped Wire	3 day
14. Spike Roll Tear	1 day
15. Floats	2 day
16. Shot Out On Face	2 day
17. Broken Fine Chain (Seamless) on Face	2 day
18. Specks	1 day
19. Loops on Face—and Fine Chain	½ day
20. Heavy Lash	2 day
21. Smash (Narrow)	2 day
22. Tear	3 day
	36 Days

Order of Frequency—NOTE: Since this order changes as the grades of work coming through vary, the order must be changed to conform with the work.

APPENDIX "B"

Outline of Instruction Material and Procedure For Training Axminster Weavers

The following outline is not intended to be complete in detail. It aims rather to set up in consecutive order the *units of instruction* essential to the complete training of an Axminster weaver. The units of instruction are so divided as to also permit up-grading or improvement training on any one or more units in which a more or less experienced weaver shows in his work need for such supplementary training. The organization of *instruction units* in progressive sequence not only assists the instructor in a systematic presentation of his instruction but also insures against overlooking and important items. Furthermore, it insures a uniform and complete course of instruction to every learner irrespective of who his instructor may be.

The following outline is not final or complete in form or material and will be revised and improved as use and experience indicate possibilities of improvement.

UNIT I (1 HOUR)

(Emphasize safety to the operator)

PARTS OF THE LOOM:

1. The knives.
2. The clutches.
3. The needle lever (Narrow looms).
4. The pulley gears and belts. (Narrow loom).
5. The shade levers and rods.
6. The shuttle rod near the cam.
7. Right and wrong ways of turnig spools to avoid chain sprocket.

UNIT II (30 MINUTES)

(Emphasize safety to the loom)

OILING THE LOOM:

1. Point out location of all oiling places.
2. Have learner completely oil the loom.
3. Have learner count number of oiling places.

UNIT III (20 MINUTES)

START AND STOP THE LOOM:

1. Instructor demonstrates throwing starting bar.
2. Have learner practice starting and stopping the loom.
3. Explain automatic stop when jute warp breaks.
4. When spools fall out (Narrow looms).

UNIT IV (30 MINUTES)

TYING WEAVERS KNOTS:

1. In jute—as it breaks.
2. In single warps—as they break.

UNIT V (30 MINUTES)

THREADING IN YARN IN FRAME TUBES: *(Loom Idle)*

1. Demonstration by instructor.
2. Practice by learner.

(*Loom Running*)

3. Demonstration by operator emphasizing importance of threading in *while* chain is moving up.
4. Practice by learner—*chain moving up*.

UNIT VI (1 Hour)

Rotation of Colors and Numbers of Spools:

1. Explanation by instructor.
2. Review of explanation by learner.

UNIT VII (30 Minutes)

Relieving Tension in Tight Frames:

1. Explanation and demonstration by instructor showing how to remove and relieve tension in tight frames.
2. Practice by the learner.

UNIT VIII (45 Minutes)

Running Warps and Selvedge Cords Through Heddles:

1. Demonstration by instructor showing how to run the warps and selvedge cords in their proper places through the heddles.
2. Practice by learner.

UNIT IX (2 Hours)

Number and Proper Order of "Shots" In the Axminster Weave:

1. Show how to tell by position of machine what shot is out.
2. Show how to put machine in proper position to put in a shot that is out.
3. Show how to start machine so as to have good "Starts" in carpets, preventing "Polks" and "Stretches."
4. Show what the various levers on the machine are for and what they do.

UNIT X (30 Minutes)

Putting a Bobbin in the Shuttle:

1. Show how to tie a shuttle cord on to the bobbin running out so as to make a good start.
2. Practice by the learner.

UNIT IX (1 Hour)

Weaving of "Seconds":

1. As a set runs out, instructor should explain weaving of "Seconds."

UNIT XII (8 Hours)

Tying in Beams:

1. Selection of proper beam—by number of ends.
2. Transporting beam to loom.
3. Placing tackle and installing beam in loom.
4. Returning tackle to proper place.
5. Arranging warp ends over tension rod.
6. Tie in ends and trim knots.
   a. Top beam—pulled through the reed.
   b. Before starting tying in bottom beam, have from five to six inch heading. The same applies after the beam has been pulled through and tied before starting a new rug.
   c. Bottom beam — in pulling through, hold down warps, run about a half dozen shots, then tie off in spaces of one inch.

WEAVING PROBLEMS

Problem I. Matching Up Spools in Proper Order After "Smashes" or "Rip-outs":

1. Explanation and instruction by instructor.
2. Practice by the learner.

Problem II. Straightening Out Lines Resulting from "Shoved Spools" and Crossed Ends":

1. Explanation and demonstration by instructor.
2. Practice by the learner.

Problem III. Repairing a Warp Smash Caused by:

1. Frames falling.
2. Tubes breaking off and falling.
3. Needle head breaking off.
4. Beam tightening up—watch the weights.
   a. Explanation and demonstration by instructor.
   b. Practice by the learner.

Problem IV. Keeping Heddles Clean:

1. Heddles should be cleaned at least once every week to prevent "Needle Floats."

WEAVERS' RESPONSIBILITIES

Responsibility I. Safety and Safe Practices are Every Workers First Responsibility:

1. Never reach inside a loom while operating.
2. Never oil a loom while operating.
3. Never clean a loom whole operating.
4. Never repair a loom whole operating.

Responsibility II. Always Report to Your Foreman Incorrect or Poorly Threaded Sets.

THE DEVELOPMENT, OPERATION AND RESULTS OF RADIO TUBE VOCATIONAL TRAINING AT THE VAN HORNE TUBE CO., FRANKLIN, OHIO

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The well known adage, "Necessity is the mother of invention", has been interpreted by the Van Horne Tube Co., to mean, that quality and quantity is mothered by "Employee Training in Industry".

The Van Horne Tube Co., after a thorough investigation of the Employee Training in Industry plan, as sponsored by the Trades and Industries Division of the Ohio State Board for Vocational Education, requested this service on June 19, 1929.

The method of training of employees was one of the outstanding considerations to the Company at the time the plan was presented, as they had purchased another plant due to increased business which demanded an increase in production from about 1000 tubes per day from 120 employees, to 5000 tubes per day, which was estimated to require a force of approximately 450 employees. Past methods of training employees, and improved production methods necessitated some form of training to accomplish the demands of their business.

The immediate request was to organize a stem assembly training at the old plant which would function with the two methods of production in operation. Specifically, the training was requested for—(A) Girls who performed the making and inspection of parts, and others who assembled the stem completely. (Note: Stem-assembly is that phase of work which assembles all the elements within the tube, known as the stem.) (B) Girls engaged for the making and inspection of parts, and others who perform certain operations in stem assembly which usually are known as unit operations.

Upon completion of the old plant training a unit type of training was requested at the new plant for stem assembly work. However, due to results of training at the old plant, the company decided before the stem assembly training was completed to extend the training to include all phases of work from glass cutting to final packing in radio tube manufacture.

The training originally at the new plant was for two groups of workers—

For Stem assembly—Stem assembly on single operation basis.

For Tube finishing work—For parts manufactured and finishing operations which the management later combined and at present is for all employees regardless of their regular work. The management recognized the many advantages to the employee if they were given a training in all phases of radio tube manufacture instead of a Unit Training.

Following an extensive analysis of departmental and job considerations, a training program was organized in accordance with the requisites of the Ohio State Plan involving practical training on the job thru a full time shop instructor, and such class room instruction as required for the development of efficient workers. This applies to training at the old and new plant, the details of each are given under the section of training details.

The general training conclusions adopted in all phases of training were as follows—

First—For efficient results to the employee and the company the method of instruction necessitated more than verbal instruction. In fact, experiment and results proved that the best results

were accomplished by the adoption of
Visual Instruction
Written Instruction
Verbal Instruction

Second—That a thorough job analysis of each phase of work in the manufacture of radio tubes was necessary for use in developing the worker to a high type of employee which is essential.

Third—The length of the training period to develop the worker to perform all phases of radio tube manufacture was determined from a consideration of the time required to acquire skill and efficiency in the work for which employed at the time of entering the services of the company, and of the amount of time necessary to complete the related training organized to become proficient in other phases of radio tube manufacture. The stem assembly training and tube finishing training originally were as follows—
Stem assembly—13 weeks
Tube finishing—16 weeks

Today, owing to management requests to combine both of the foregoing units of training, regardless of conditions, each worker receives a training covering a period of 26 weeks.

Fourth—Details of Shop and Related Training.

During the entire training period the employee is assisted and supervised by a full time plant instructor and in addition receives seven (7) hours per week related training, during the 26 week training period, or 182 hours. The related training wherever possible has been organized from the layman's standpoint, in order that the worker may understand and obtain the maximum benefits of the training material. The related training also requires the cooperation of certain plant executives where their assistance proves advisable. Verbal and written examinations have been incorporated where permissable but in part of the related training program, the workers' ability and knowledge is determined from direct contact and performance of the work, following explanation, demonstration and discussion by the plant instructor.

The related training is conducted during the daytime.

Other general training details incorporated are—

1. Determination of personal requirements of the new worker.
2. Proper procedure of conducting new worker to the department.
3. Proper method of starting worker on job.
4. Proper procedure of instructing new employee.
5. Continued supervision and assistance to employee in job performance.
6. Organization of complete related training material.
7. Essential shop and related training records.
8. Plant instructors' duties, responsibilities, results, etc.

Previous to the organization of a definite training program, personal qualifications were not considered, as the nature of the work required but today every new employee must possess the following—

1. Good sight
2. Good hands and feet
3. Ability to read and write
4. Interest in work—effort of observation and concentration
5. Steady nerves
6. Good character

1. Good eyesight is essential as the work requires the employee to be able to visualize distances between the elements, inspect and maintain specified clearances. Gauges and other measuring instruments very often cannot be used, besides, the construction of tubes are such that the measurements cannot be made by measuring devices, and the eye therefore must be used. Very often, if the work is not performed accurately by the use of the eye at the time of assembling the parts, the defects due to poor workmanship are not detected until final testing of the tube. If the tube is defective, in the majority of cases it can not be repaired and the tube is then destroyed, or, if of minor importance it becomes a seconds-tube instead of a first-tube with corresponding reduction in selling price. Eye strain is eliminated as much as possible by the company by providing good lighting facilities (artificial and natural) but as a protection to new employees, as well as the company, they have made good eyesight a job requisite.

2. Dextrous hands and feet are required in many of the phases of work in radio tube manufacture. Most important is the condition of hands as in stem assembly the worker must use small tools and perform delicate operations which requires nimble fingers. The use of feet is primarily confined to the operation of forming machines, electric welders, etc., and requires free movement of ankles and leg muscles.

3. The ability to read and write is essential. The training plan provides detailed job instruction material and personal reports which the employee must utilize in connection with their training. The regular plant forms, instructions, etc., also requires the worker to be able to read and write.

4. Interest in the work by the employee is constantly observed by the instructor, as the nature of the work is such that continuous observation and concentration is essential to insure meeting the high standards of tests used by the Company.

5. Steady nerves in most of the work is a requisite to avoid defective workmanship and for maximum earnings possible.

6. Good character is required for two reasons, first to attract the type of girl who desires employment with such employers where her character will not be questioned due to nondesirable workers and second, as many industries have found that girls with good character possess more interest in their work, besides their workmanship, ability and development is more certain.

Proper Procedure of Starting New Worker in Department

The new employee upon employment is assisted by the forelady to the department instructor, who informs her as to the plant rules, nature of product, departmental training she will receive and such other information beneficial to the employee and the company.

Method of Starting the New Employee on Job

The method of starting a new employee is very important. The plan, as organized, eliminates the many disadvantages which usually arise due to the new employee being instructed by another employee, or a forelady having many other responsibilities. Under the organized plan, the worker is given the proper initial training in order to acquire skill and knowledge of the work for which employed.

The sequence in starting the new employee is as follows—

1. The new worker is placed, for a limited time, beside an employee performing the same type of work for which she has been employed. The purpose of this is to permit the new worker to become at ease and observe the work.

2. Following this, the new employee is assigned to her regular place of work and the general job details explained; namely, tools, equipment, etc., by the plant instructor.

3. The worker is then given the visual and written job instruction material prepared to read for such time as the nature of job requires. (Usually 15 to 30 minutes.)

4. The instructor then returns and explains the visual and written instruction material in detail with repeated demonstrations, gradually involving the worker step by step until the worker shows sufficient skill and knowledge of the work to permit her to start. The worker then engages in the work with the assistance of the instructor as necessary; the instructor at the same time observing the worker's job difficulties and assisting further.

5. After the new worker has once started to work, the instructor then determines from observation, inspection, and employee training reports the additional instruction necessary to obtain quality and quantity. Continued assistance and supervision is given the

worker during her entire training period regardless of her ability for development of proper skill, habit and knowledge to insure the work being performed as desired by the company.

Benefit of Related Training Material and Classes

The related training material developed and used in the classroom (away from the job) assists the worker in her shop work directly or indirectly. The related training has many advantages in that it permits the worker to learn, thru knowledge and application, every other phase of work in the manufacture of radio tubes, thereby preventing her present work from becoming monotonous, and the possibility to advance to other positions. The related training gives to the worker more steady employment, and to the Company more uniform production due to greater flexability to help control.

Shop and Related Training Records

Each employee in training has a shop record and a related training record. The shop record contains a record of the employee's practical training received during her training period, and in addition shows the results of her work, as daily defective work, production, etc., for use to the plant instructor, and to the company in determining the instructor's efforts and results. The related training record contains the subjects the worker has engaged in and completed with grades. Both records are presented by the instructor to the management periodically to determine the worker's progress, etc. Upon completion of training, these records are filed for future use in promotions and re-employment. To date they have proven very valuable.

Plant Instructor and Duties

Each plant instructor has been selected from the organization, and has been the most efficient department employee who possessed in addition the necessary requisites for instructor positions. In fact, in the stem assembly training, the head forelady, so to speak, today is a plant instructor. This was made possible thru previous training of other employees who possessed the necessary forelady qualifications in addition to job skill, and knowledge.

The plant instructors, in addition to shop instruction also conduct the related training for their group; in fact, the plant instructor is entirely responsible for the shop and related training of her group.

The plant instructor's duties, in detail, are—

1. Prepare visual and written instruction material.
2. Revise and maintain visual and written instruction material.
3. Assist new employees with job instructions.
4. Check employee in training daily as to method of procedure in performing work, progress, etc.
5. Review shop reports daily.
6. Prepare related training class material.
7. Conduct related training class and maintain related training records.
8. Submit employee in training records to management for their consideration.
9. Assist employees advanced to other work.
10. Arrange for special meetings and lectures for employees in training.
11. Meet periodically with District Apprentice Coordinator to report on training and results.

Old and New Plants

DETAILS OF RADIO TUBE TRAINING AT THE OLD AND NEW PLANTS

Practical Training at the Old Plant

As previously mentioned the practical training is confined to stem-assembly work.

The training, as organized, develops the worker either for unit operations or for complete assembly.

Under the unit plan of practical training, the worker performs only part of the stem assembly, as for example—

Operation 1—Filament Placement

1. Look over filament support wires for proper clearance and cold cracks in stem.
2. Weld filament to filament leads.
3. Form filament with forming tool.
4. Bend filament down and hook filament to filament hook.
5. Align filament with forming tool.

Operation 2—Grid Mounting

Operation 3—Plate Mounting

Each division has a visual and written instruction card with job performance in sequence and contains such precautions and other considerations necessary in performing the work.

The complete stem assembly practical training requires the worker to inspect parts received, form, assemble and perform final inspection.

Related Training at Old Plant

While the practical training at the old plant is confined to stem assembly, nevertheless, the related training program includes training from glass cutting to final packing. This permits the girls at the old plant to be transferred or promoted to other work at the old or new plant, when conditions permit.

New Plant Practical Training

At the new plant the practical training involves every phase of radio tube manufacture, which in general, are—

Glass cutting (stem and flare).
Flare forming.
Stem forming.
Making of parts and their inspection.
Stem Assembly operations (unit basis)
Tube sealing.
Exhaust machine operations (in steps)
Preliminary Basing operations.
Basing operations.
Base contact operations.
Aging of tubes.
Testing of tubes.
Stamping of tubes.
Polishing, cleaning, painting and packing.

Related Training at the New Plant

The related training program, as organized, involves a study, with practical experience in every phase of radio tube manufacture, which the worker is capable of understanding.

Owing to conditions, and the many types of tubes manufactured, in addition to the large number of operations involved in the radio tube manufacture, a detailed outline of the practical and related training would be too lengthy to be included herein. Furthermore, while applicable to this plant it would have to be revised to be of value in similar industries.

Results Accomplished in Training

A summary of the results of Employee Training in Industry as applied to the Radio Tube Industry mentioned herein, since its adoption June 19, 1929 to date, are as follows—

1. Attracted the more desirable type of girl.
2. More steady employment with increased weekly earnings due to ability to engage in other phases of work when regular work was exhausted.
3. Less employees but with more steady employment to those in employ.
4. More uniform production owing to greater flexability of help control.
5. Decided reduction in defective work.
6. Less time required to develop worker for work for which employed.
7. Improved quality of tubes.
8. Ability to change with little loss of time from manufacture of one type of tube to another.
9. Worker more interested in work.
10. Less discharges of workers on account of unfair methods.
11. Definite method of determination of workers qualifications for other positions, including advancement.
12. Part of bonus plan inaugurated due to worker's results.
13. More certain of re-employment—Based on former training and ability instead of other undesirable methods to the worker and to the Company.

In conclusion, probably in no better way could the attitude of the Company be expressed as to the results of training, than by quoting their oft repeated expression—"We realize its benefits to the employee and are sold on the Employee in Industry Training plan 100 percent."

EXAMPLES OF TRAINING IN THE TELEPHONE INDUSTRY

By Miss M. E. Fawcett
American Telephone and Telegraph Co., New York City

There are many kinds of courses being conducted in the Bell System, ranging from educational courses for messengers to development courses for people in executive positions. The largest individual group to be trained each year, however, is the telephone operators.

There is some impression that operators are not required with the dial system, that its use is reducing employment for women. As a matter of fact, a great many operators are required to handle toll and other special calls and to assist in the general operation of the dial system.

When the dial system was introduced in 1920 there were 128,000 operators in the Bell System. At the present time, due to the growth in the business and the requirements for operators even with the dial, 160,000 are employed, although the system is now 28 per cent. on a dial basis. By 1940 when it is expected that the conversion to the dial system will be completed, it is estimated that 180,000 operators will be required.

In addition to the growth in the business, replacements must be made to care for losses due to marriage, promotion to other positions in the company, etc. You can appreciate that to add to our operating forces steadily and yet to give a uniformly good grade of service, requires an adequate training course applied by well trained instructors with a definite training objective in mind at all times.

Length of Course, Training Objective

Our initial training course for operators varies in length depending on the class of operating and the number of operations to be taught, the usual time being from two to three weeks with certain classes lasting six weeks.

Our objective for the training course is to graduate student operators who can handle telephone calls accurately and with a reasonable degree of speed. The initial course of training is given in the training department and is followed by a regular course of development in the central office.

Personnel of Operators' Training Department

Each Operators' Training Department has a manager in charge who is responsible for the selection, training and development of instructors for her department. These instructors have come up the line of organization from operators to supervisors and supervisors to instructors. We have a problem in developing these instructors, which is similar, I believe, to that of many other industries, that is, we have people who are expert in their trade, who have pleasing personalities and an aptitude for teaching but who have no knowledge of training methods and no teaching experience.

We realize that no matter how complete or well written a training course may be, it is of very little value if it is not applied by well trained instructors. For this reason we make a very careful selection of instructors and give them a thorough preparation for their work. This preparation consists of a series of discussions on training methods, practice teaching followed by the assignment of definite tasks in the training department and then the actual conducting of a class under the supervision of the Chief Instructor. It takes on an average, about six months of training and development work before an instructor attains a satisfactory degree of efficiency.

The manager of the training department also arranges for conferences of instructors at frequent intervals. The purpose of these conferences is to keep alive the interest and enthusiasm of the instructing staff, to discuss improvements in training methods and to discuss the results being obtained in the training department.

Initial Training of Operators

When applicants are accepted as prospective telephone operators they report to the Operators' Training Department to receive the required training. Before starting the actual work of the course, every effort is made to make the students feel at ease and to familiarize them with their new surroundings. They are introduced to their instructors and are conducted through the training quarters, the dining and recreation rooms and then to their classroom. The classroom instructor then gives a brief outline of the course, states the training objective and answers any questions the students may wish to ask. After these preliminaries the regular work of the course is started.

Our training course for operators is divided into three parts, namely, presentation of the lesson, practice on a practice switchboard and drills.

The lessons are presented in a classroom which is equipped with a demonstration switchboard, charts and a blackboard. A demonstration switchboard is a duplicate of a section of an actual central office switchboard. It contains working equipment similar to that which the student will use when she goes to the central office, and with its help the instructor can demonstrate all of the conditions in the lesson by manipulating control keys at the side of the demonstration board.

The first call taught is a telephone connection from one local subscriber to another. This call is the only one given during the first classroom and practice periods. After this call is thoroughly mastered, variations are introduced, each variation being embodied in a separate call. For example, a busy line, a slow answer by the called party, etc. We have found that the students grasp the variations in the handling of each type call much better when they have built up some experience in handling the simplest type calls.

The instructor demonstrates and explains each call making use of the demonstration board in doing so. All phrases or codes which the operator is to remember are written on the blackboard. At the conclusion of each call the instructor calls on the students to take turns handling the call on the demonstration board. The instructor acts as the telephone user, the student as the operator and the other students watch closely and are ready to comment on the handling of the call. Each call is mastered in this manner before the instructor proceeds to a new call. At the conclusion of the lesson the students are ready to go to the practice switchboard to practice on the lesson just presented.

The practice switchboard is a duplicate of a regular central office switchboard except that calls are not received from subscribers but from a calling desk operated by a specially trained operator. There is one of these calling desks for each group of three switchboard positions, since one desk operator can not keep more than three students busy all of the time.

The desk operator, by means of the equipment provided is able to give practice calls to each student. The student establishes the connections on the practice switchboard and these calls return to the desk so that the desk operator is acting as the originating and receiving parties on the call. The desk operator gives practice on the lesson just learned by the students and then reviews calls learned in previous lessons. Every effort is made to make this practice simulate regular central office operating as closely as possible.

There is a practice instructor to supervise the work of each group of three students and to direct the work of the desk operator. The practice instructor assists the students when necessary, but any instruction she gives is brief, as it is assumed that the student has learned the details of the call in the classroom and too much assistance or interference while the student is working is discouraging to the student and decreases the number of practice calls handled during the practice period.

Drills are usually given by the classroom instructor and as far as possible are fitted to the requirements of the individual. These drills are divided into three classes, voice drills, hearing and understanding drills, and drills for developing technical skill.

One of the requirements for telephone operating is a clear, pleasant speaking voice free from accents or impediments. In addition to these requirements however the students must learn to speak with great distinctness so as to avoid the danger of being misunderstood and they must also learn the telephone way of pronouncing numerals. You have noticed, no doubt, that we exaggerate the pronunciation of some of the numerals slightly to lessen the danger of confusion of misunderstanding. For example, "five" and "nine" sound very much alike over the telephone so we pronounce five as if it were spelled fi-*iv* and nine as though it were spelled ni-*yen*

You may also have noticed the use of rising inflection on so many of our phrases as in "Number please" and "Thank you." This rising inflection is used primarily because it prevents trailing or fading of the voice on the last syllable; it also adds a pleasing quality to the voice.

Operators use their voices fairly constantly and as we wish them to avoid fatigue and voice strain we train student operators from the beginning to speak in a low tone of voice and directly into the mouthpiece of their telephone sets. If you have never visited a central office I think you would be quite surprised with its quiet, despite the fact that in a large central office there are as many as one hundred or more operators all speaking at one time.

The hearing drills are given to develop the hearing of the student operators and the understanding drills to develop familiarity with the sound of central office names and orders which they may receive. You have probably noticed when using the telephone that you have little or no difficulty understanding names with which you are familiar but it is sometimes very difficult to understand a name which you have not heard before, over the telephone.

The technical drills are given to develop ease and speed in the handling of the apparatus used in establishing connections.

Each day's work is planned in advance by the instructor so that no time is lost during the day, and emphasis is placed on the switchboard practice, the presentation of the lesson and the drills being incidental to the practice work.

Central Office Training

At the conclusion of the initial training course the students are sent to the particular central offices to which they have been assigned. Here again first consideration is given to putting the students at ease, by introducing them to other operators, escorting them on a tour of the building, and other attentions. After this introduction, the Chief Operator greets the students and assigns each one to a different section of switchboard, so that no supervisor will have more than one student in her section at the same time. The supervisor becomes responsible for the development of the student who is now called a junior operator. The supervisor's first task is to assist the new operator in overcoming any fear or timidity that she may feel at the start, and to give her ample opportunity to adjust herself to her new surroundings. The supervisor remains with the junior operator when she starts operating, but interferes with her handling of the work as little as possible; instead she builds up the junior operator's self-confidence by commenting favorably on features of her work which are being done well.

Part of the student's training has consisted of referring matters on which she has received no training or cases where she is doubtful of the procedure, to her supervisor. The supervisor is always within call of the junior operator and assists her with the call on which she is having difficulty. The supervisor then discusses the case with the junior operator so that she will know how to handle it the next time.

The supervisor analyzes the work of the junior operator during the first week she is operating and starts working with her on items of her work which should be improved, selecting the items that will cause errors, taking one at a time. The supervisor is careful not to discourage the junior operator and for that reason makes no mention of minor faults, which do not affect the service, until later in the junior operator's development. A junior operator can operate accurately and with a reasonable degree of speed when she starts operating, but it requires from six months to one year of development work before she reaches maximum efficiency.

Selection and Development of Supervisors

All supervisors are selected from the ranks of operators. The Chief Operator is constantly watching for operators who indicate possibilities of becoming supervisors. These operators are given special tasks to test their qualifications for the position of supervisor and if they have the qualifications are appointed as soon as there are vacancies. There is an understudy for each supervisory position in the central office so that in case of promotions, resignations, etc., there are trained people to step into the vacancies.

After selecting an operator for the position of supervisor, the Chief Operator starts a series of discussions with her. These discussions cover the duties and responsibilities of supervisors, a study of the development of operators and a review of Company policies. These discussions are followed by short periods of supervising under the direction of the Chief Operator or one of her assistants. During these periods the Chief Operator attempts to develop the new supervisor's powers of observation, ability to analyze, and the application of the proper methods of developing each operator. These daily periods of supervising are increased until the supervisor is competent to take charge of a section of switchboard.

The Chief Operator holds conferences of all supervisors at regular intervals for the purpose of stimulating interest and enthusiasm in the work, developing initiative and judgment, exchanging ideas and for the general improvement of the supervisors' work.

Retraining

Whenever new operating practices are introduced they are taught to the supervisors first and they, in turn, train their operators. The operators are relieved from the switchboard for this purpose.

When a new type of switchboard is going to be introduced, for example, a conversion from the manual to the dial system, a practice switchboard of the new type is provided and all operators are scheduled for a sufficient number of hours practice on this switchboard so that after the cutover they will be able to perform their new work efficiently.

New Training Methods

The procedure for the development and promotion of operators which I have outlined to you is, in general, one which we have followed for a number of years, but we are making a constant study of our training methods and training equipment, consequently, we have been very much interested in the rapid strides being made in vocational training and are trying to keep apace or even ahead of the times if we can. In this connection you will probably be particularly interested in some of the improvements we have made in our training in the last few years.

One of the things we have done is to apply the "Job Analysis Plan" to our work. We prepared forms for this purpose, listing all of the operations which an operator would perform in the course of an average day. We then had observers listen and observe for one day with average operators in various central offices, tallying each operation as it was performed. Enough

observations were made in various central offices in each training area to provide an accurate picture of what constitutes an operator's job. These observations were then summarized for each training area, showing the number of times each operation occurred in one hundred calls. We found that certain operations occurred so infrequently that a junior operator would be in the central office from one to three months before she would have occasion to perform them.

As a result of these analyses we were able to eliminate certain items from our training courses, thereby enabling us to concentrate on the fundamentals and making the courses more practical. Before modifying the training courses, however, we developed another analysis which was also very valuable to us. This was an analysis of the work of junior operators when they first started operating. The observers tallied each operation performed by the junior operators and recorded each operating fault. They also used stop watches to time the intervals taken to perform the various operations. These observations were made without the knowledge of the junior operators and were not discussed with them as they were taken for the purpose of checking and improving the training course and not as a check of the junior operators' work.

These observations were made on a representative number of junior operators and were summarized to show the frequency of each operating fault and the percent. of junior operators involved on each fault. The average time interval for performing each operation was also recorded.

Where certain faults were common to the majority of the students we knew that our training was at fault on those particular operations and consequently, we devised means of improving our training of these operations, by changing their location in the training course, by improving the method of teaching them, by increasing the number of practice calls and in some instances by designing new equipment features on the practice switchboard.

After the training course was modified in accordance with the results obtained in the analyses, another analysis was made on junior operators trained with the new course. By comparing the results of the two analyses we were able to judge just how much improvement had been made both in accuracy and increased speed. This second study also showed us the effect of eliminating certain operations from the training course. We found there were fewer references to the supervisor than there had been in the old course because the junior operators were better grounded on the fundamentals and knew what they had been taught so well that the decrease in requests for assistance on these operations, more than made up for the requests for assistance on infrequent operations.

Training Private Branch Exchange Attendants

In addition to training telephone operators for our central offices, we also train attendants for Private Branch Exchanges. We have special departments for this training and while the course is short, it is very intensive and practical and is followed by periodic visits to the attendant at the switchboard at which she is working. When it isn't possible for the attendant to come to the training school, we send an instructor who gives the attendant training, on her own switchboard.

We feel as responsible for training private switchboard attendants as we do for training our own operators, because private attendants originate or receive an appreciable number of telephone calls and unless they are well trained and cooperate with the central office operators, our service cannot reach the high standard which we wish to maintain. In some of the large cities, more than 50 per cent. of the telephone calls either originate from or terminate at private switchboards and there are a total of 80,000 private attendants or about one-half as many private attendants as there are central office operators in the Bell System.

Summary

To summarize:

1. Telephone operators receive an initial training course in a training department, followed by a regular course of development in the central office.

2. Retraining classes are conducted, when new practices or methods are introduced.

3. The usual line of promotion is from operator to supervisor, supervisor to instructor, instructor to assistant chief operator, and assistant chief operator to chief operator. There are special training courses for each of these positions and there are always alternates or understudies for each position so that a well trained person is ready to step into a vacancy.

4. We have a special department and a specially trained staff in each city for the purpose of training, retraining and visiting private branch exchange attendants.

5. Conferences of each group of supervisory people are held at regular intervals, and special development courses are conducted at times.

TRAINING FOR THE LAUNDRY INDUSTRY THROUGH A RESIDENT SCHOOL PROGRAM

By Lloyd A. Peck
Director, Vocational Training School, American Institute of Laundering, Joliet, Illinois

The general topic of this section of the program is "Examples of Training in Industry For Specialized Operations". Because of the nature of the training program which I am going to discuss, it will be necessary to approach this general topic indirectly.

The Vocational Training School at the American Institute of Laundering was established to train men and women in all phases of the art, science and practice of laundering through a resident school program. Practical instruction is emphasized to just as great an extent as possible in the time allotted to each course. All of the instruction, however, is interpreted from the standpoint of management and our goal is to train students in such a way that they should eventually develop into important supervisory, managerial and executive positions in our industry. It will then be through these people, highly trained in practical present-day practices, that detailed training will be afforded the workers in our industry in all of their specialized operations.

To understand our school program better it might be well to briefly summarize the nature of our organization and its development.

The Laundryowners National Association was established over forty-seven years ago and, with the rapidly changing trend of trade association work, has developed primarily into the channels of service and education. This program was inaugurated some twenty years ago, when Mr. W. E. Fitch took over the managership of the Association. It was his ambition to change the tone of the organization from one rather loosely knit, with the main function of holding a national convention once a year, to one which would give leadership and service in improved methods constantly to the members. Largely through his vision, leadership and hard work has the Association developed now into one of the leading educational and service trade organizations of the country.

The Association has a staff of approximately thirty people and one of its major activities is service to the industry through a service bureau. The staff in this service bureau are largely technically trained men and women who have been practically trained in the laundry business. Included in this group are textile chemists, chemical engineers, mechanical and electrical engineers, directing their work along industrial engineering lines, account-

ants and a Merchandising Department. The work of this staff is two-fold; first, to develop and accumulate data and ideas in connection with the best practices for the industry in the particular phase of laundering with which they are concerned and, second, to disseminate that information to the membership through a monthly bulletin, special bulletins, addresses and conferences at state conventions and local meetings, and through personal service and survey work in member plants.

In addition, the Association is sponsoring and directing a national cooperative advertising program, carrying on publicity and educational work outside of our own industry and, generally, performing those functions nationally for the industry which no individual member could accomplish for himself.

Fifteen years ago a number of farsighted and progressive laundryowners conceived the idea of an Institute which would expand the service and educational work of the Association in a much more definite and tangible way. Among a number of objectives the following are the most outstanding:

1. To conduct more practical and valuable research and development work for the industry.

2. To establish a commercially operated laundry, operating as nearly as possible under conditions identical with those existing in the Industry. This plant to give leadership to the approved methods of business management, selling and production and to serve as a tangible example for the industry.

3. The establishment of a training school where laundryowners, their sons, superintendents and ambitious young men and women could receive thorough training in all phases of laundering.

The American Institute of Laundering was organized and established in 1922, after seven years of planning and promotion of the idea of an Institute. From then until the first of this year, the major function of the Institute was the operation of a commercial laundry business in Joliet which was controlled and operated by the Association.

Last year we constructed new facilities, including offices for the Association, complete school facilities, research laboratories and a new, modern and larger commercial laundry unit. Because of these facilities we were able to assemble our entire staff in Joliet, including the moving of the Association headquarters from LaSalle, Illinois, and our research staff, with the exception of one man, from Mellon Institute of Industrial Research, Pittsburgh, Pennsylvania.

Our program now brings into physical being the goal of the men who first conceived the ideal of an Institute in 1915.

My purpose this morning is to tell you briefly how our Vocational Training School functions, its purpose and interpret its value to the industry which we are serving.

The value of any worthwhile undertaking should be measured largely from the standpoint of a long-run program. Unquestionably the establishment of the Training School, which will constantly release men and women to take their places all over the country in the laundry business, will do more to establish sound business practices, make for successful operation and, most important, generally raise the standard of an entire industry, than any other one single function which could be performed.

Our service work has far-reaching general educational value, but it cannot approach the effectiveness of actually training the people who eventually will fill positions of major responsibility within the industry.

Fortunately, our industry is Association-minded and there is a free exchange of information and ideas. Therefore, the influence of our students in years to come throughout the section of the country where they may be located should be most constructive.

Five 8-week intensive periods of training are offered consecutively each year from the first of September to the latter part of June, covering the following divisions of the laundry business: Power Plant Engineering, Production, Textiles and Washroom Practice, Accounting and Office Administration, and Sales, Service and Advertising.

These courses are so designed that students may enter at the beginning of any course and take any number of courses. Each period of training is complete in itself, covering one major phase of laundering. This arrangement permits students to receive instruction in the one phase of the business in which they are primarily interested, without taking time which they possibly could ill afford on other subjects. It is then possible for them to return later for other courses and, in that way, gradually complete their training in the laundry business with an opportunity to put into practice immediately the information gathered in any one period. It also permits those students who wish to complete training to obtain it in approximately one school year.

In each course just sufficient theoretical and technical instruction is is offered to permit the student to thoroughly understand the application of each subject to modern procedure. Instruction is offered in classrooms, laboratory, a student training laundry where they manually perform various operations and the commercially operated laundry where they study the practical application of the instruction they have received. We do not permit the students to work in the commercial plant, since that is a permanent and highly trained organization. Emphasis is placed on the practical and the students are instructed in present-day methods and standards.

The arrangement of courses outlined above permits the service staff of the National Association to serve as instructors in the School during the courses in which they are especially qualified to teach. The School then requires only eight weeks of the time of any one group of the Association staff each year and the remainder of their time is available for their other work. This arrangement makes available a technically and practically trained staff of approximately fifteen people.

Since the School is made possible because of the support of our members, we require students to be sponsored by a member of the Laundryowners National Association. This sponsorship does not carry with it a definite responsibility but rather an approval. It does not mean that we are not interested in training young men and women who are interested in making the laundry business their career. The contrary is true. We believe that by attracting ambitious and well-educated young men and women to our industry and training them through intensive courses that we can do much to improve standards in our industry and assure its growth, success and prosperity.

While we do not demand rigid educational entrance requirements, students should have a high school education and additional educational background is a decided advantage.

The first courses were inaugurated on January 6th of this year and we are just completing the fifth course, making the first cycle complete. We have thirty-five students in the present course and a constantly increasing enrollment.

There are many interesting problems in the organization, development and direction of a school of this nature. Probably the most interesting is the wide variations in the student body itself. In our present class we have a range of age from eighteen to forty-seven; educational background from less than high school training to several college graduates; men who know nothing of the laundry business to owners and practical operators who have been in the business for years; laundryowners' sons from prosperous families to ambitious men who have worked hard to save enough money to attend the School, and all types of temperament, personalities and viewpoints.

FOREMAN TRAINING FROM INDUSTRY'S STANDPOINT

By ARTHUR SPEER
American Cast Iron Pipe Co., Birmingham, Ala.

Should we be asked to name one of the most important factors in our national life at this moment, a factor that has placed America at the forefront of the world, I wonder what your answer would be. Before a group of educators, the school system with its billions invested in buildings and equipment looms large as an important factor in our national life, and it is. Bismarck said "What you want the nation to believe put it in the schools." He almost lived long enough to see that prophesy come true.

There are others that would name Agriculture as the basic factor in our national life, and judging by present-day agitation politically and otherwise we would vote for that. Banking, shipping, commerce, etc., would also pole a heavy vote. In the realm of material things as a factor in our national life I would like to call your attention to the U. S. census report for the year 1929 in which a figure upward of 68 billions of dollars in the form of wages, raw material, electrical and other power was transformed through industry into a new and added value of over 31 billions in new wealth. America's position as a world power, no one will deny, was won by her ability to produce. The influence of this important factor in our national life has not only changed our method of living more than all the other factors combined but it has produced men of action and large caliber as well.

Coolidge no doubt, will go down in history as the tight lip president, but he did open those lips once, long enough to speak a truth that in the years ahead may find a place along with Lincoln's Gettysburg Address, when he said, "He who builds a factory, builds a temple, and he who works there worships there." Just as Abraham Lincoln's immortal words at a time in our nation's history set men to thinking, so Calvin Coolidge's message when understood by student and teacher, owner and worker alike, and applied in this industrial age will also go a long way in shaping the destiny of this nation, in the making of a strong, unified commonwealth.

America's Factory System has ushered to the front of the industrial stage within the last twenty-five years an entirely new product, whose coming was unannounced, whose praises unsung, never-the-less, a potent factor in production, management and relationship, and whose position in the future is destined to become increasingly important in the field of the nations greatest productive power. This product is none other than the foreman. The man next to the men. There are one million foremen in the industries of America today. If it were possible for these men to pass a given point walking in a line, they would reach out for one thousand miles before the last man passed by. This vast army of men are directly in charge of 30,000,000 workers whose job is not only to produce but to interpret the policies of the company to the men and also determine the character of the company's product.

The future security of this gigantic industrial machine, will not rely altogether with the men at the top, nor will it be vested in the men at the bottom, but its assurance of stability will depend largely on that middle factor, who holds the balance of power.

If communism, anarchy, or any other kind of agencies who have for their objective the over throwing of America's present social order, gains a foothold in this country no doubt it will make its appearance through the industrial door.

Therefore the training of the foreman and the foreman to be, in my opinion, is the one great opportunity for vocational schools, colleges and industry alike, and promises more for its return in production, relationship and security of the nation's welfare than any other known factor in its present everyday life.

The history of the institution that produced the foreman is a very interesting study and is a valuable adjunct to teachers and students the world over, who wonder at America's greatness in the realm of production. A definite change was noted in its development about the years 1895 to 1900, when the old factory system under one man management began to give way to corporate management.

Previous to this date, the president of the company in a great many instances was the sole owner, and in this capacity he was the sales agent, purchasing agent, production manager, superintendent, foreman, paymaster and personnel director all merged into one. All employees reported directly to him. With issuing of stock and the coming of corporate management, the situation changed and a new factor came upon the stage in the person of the foreman.

Lifted from the ranks, without previous training other than his natural ability, he rose to his position by hard work and application of ingenuity in production, and his ability to get along with his fellows. These qualifications, which he was keen to properly evaluate made him a leader of men, indeed a foreman. Now his position in modern industry is not questioned, and more is required of him than any other known profession for the amount of training given. He has taken the place of the old time president, as his department is, under the new system, a small factory along with numerous other factories, all of which constitutes the whole, with the corporations' executives and owners far removed from the men who work and whose policies big or little, and the character of its product are interpreted to the men by the foremen only.

The foreman is a leader and more and more he is becoming a character maker. At a foreman Summer School, Silver Bay, N. Y., after an eight day session the foremen themselves brought in this definition:

"A foreman is a man so situated in industry today that he directs and guides those under him in such a manner as to represent management to men and men to management, striving to assure profit to management and a fair deal to men, thus reflecting to the community a successful organization."

In our plant we have what we term the first line supervision and the second line supervision. The first line supervision consists largely of the old tried and experienced foreman and heads of departments. Their training consists largely in discussion groups led by a competent official of the Company, a visiting expert or a teacher from the University. Shop practice, costs, production, relationships, counseling and guidance in matters of shop routine are subjects from which they have long graduated from the school of "hard knocks." This, however is not enough because the nature of our business like the average manufacturer is constantly undergoing a change and new demands from the consumer, due to high pressures, improved distribution systems, and a greater demand for a better product at a less cost, is a factor to be reckoned with daily. This condition is forcing us to train intensely our second line supervision in order that we may carry on in the future effectively in the face of sharp competition and this ever growing new requirement. In order to do this training to the best advantage we are calling in not only our own staff of engineers who are trained men but the college itself through its extension courses which are adaptable to our particular field. We are also like a great many other industries establishing fellowship in the near-by University for the purpose of research in the field in which our product and its future lies. These men eventually will be absorbed into the regular organization, provided they show aptitude and initiative in this direction.

It is the policy of the Company to admit no young man to its payroll

unless he has at least a high school education. The reason for this is obvious, as the future demands in the manufacturing of our product management, etc., is constantly calling for a higher degree of intelligence in skill, safety and relationships. Training in management, democracy, goodwill, etc., with constituted authority are essential factors in modern industry and will become increasingly so in the days ahead.

The latter item is of especial importance in any employee owned corporation, which the American Cast Iron Pipe Company happens to be. Promising boys of high school age are given employment on part time basis and are encouraged to go on through college with a view of joining the Company staff after graduation, paying particular attention in their college courses, to the problems they will encounter in the plant.

Manufacturers may ask, why does your company give time, thought and money to the subject of training when we are taxed by the state for the same purpose? It is true the schools, land grant colleges and some universities of our country are supported in a large measure by taxes and industry pays her share, directly or indirectly. The American Cast Iron Pipe Company pays taxes in 25 states. We are tremendously interested in this growing question, and naturally would like to see some of its results flowing back through the channel from which it came. But that is not enough—it is such a big job. I asked Mr. Cameron Beck, personnel director of the New York Stock Exchange, this past summer this question, "Mr. Beck, you have the distinction, whether you deserve it or not, is a matter of conjecture, of being at the center of things where the nation's pulse can be counted. Now tell us, since the smoke is clearing, and you look out over this nation, what job would you like to tackle as the greatest need?" He replied in substance that he would like to visit the colleges and industries and speak on the great opportunity of the schools in laying along side of industry's great educational need, in order that the teacher and student both might better understand industrial values and possibilities on the one hand, and that the factory owner and worker might apply science to its problems of waste and comradeship in the building of right relationship inside the mills.

Incidentally an analysis of the stocks of the companies listed on the exchange, we are told, showed that those stocks that weathered the storm, to good advantage (and there were about 300) were largely owned by the employees of the companies. These employees had been giving their time, training and talent to efficiency, in the elimination of waste, increasing production, safety and right relationships, in these plants, which are recognized attributes for sound investments.

If the tendency in American Industry in the future is toward employee owned stock, wholly or in part, it must follow that the foreman, who is the key, the man next to the men, must be trained more intensely for his job. History seems to be repeating itself just as the specifications for presidential timber covered a multitude of requirements for the handling of the factory of 1895, so the department in the modern plant has in time become a factory in itself related to the whole, and requires of the foreman of that department characteristics of the former president type with numerous added responsibilities of compensation for accident, group insurance, working conditions, keen competition, labor and relationships that the old system did not have.

The training of the foreman in technique is a very important function. But there is a factor in relationships that is the capstone of the whole structure, and that is the spirit of the worker. Unless the foreman can impart that spirit to the worker, a spirit that eminates from a man of character, who believes that God has a place in the working man's weekday temple, all of his training, college or otherwise falls short. The old company president coming to work with his men each morning passed a friendly greeting to them personally. He asked John, "How is the sick baby?" and stopped long enough to give friendly aid to John in his need. He knew what this relationship in his plant was worth.

The eyes of the nation have been focused on the Textile Industry of the South for some time especially within the last two years where problems real and imaginary fanned to white heat in spots by propagandist, threatened to wreck a very sick industry that was unorganized at the top and unorganized at the bottom. The steadying hand of the foreman played no small part in helping to direct the worker in the channels of sober sound thinking at a time when both men and management needed it most.

Mr. Coolidge is right, "he who works there worships there," and the greatest contribution that the schools of the nation can make to industry is not only to train her foreman and prospective foreman in the technique of the job, but the bigger thing is to recognize and teach that there is a spirit in man and to that end direct his efforts not only to make this nation's industry sound, but, also a benefactor in building better men as a product from our factories along with its manufactured output.

MENTAL HYGIENE AS A FACTOR IN JOB ADJUSTMENTS

By A. H. Dyon

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The concept of hygiene is not a new one. The early Greeks paid tribute to Hygeia, the goddess of health. Ancient civilizations recognized the importance of hygiene in personal and social relationships, the standards varying with the period and with the degree of civilization attained. Our understanding of hygiene, however, as a definite science of preserving and improving health is a matter of relatively recent development. This is particularly true of mental hygiene.

In considering its application to industry, it might be well to refer briefly to the growth of this idea. Progressive social movements very frequently have their origin in the vision of some outstanding individual who is able to recognize a definite social need and who has not only the courage of his convictions but also the practical ability to secure the cooperation of others in carrying out an effective working program. This was the case with Mr. Clifford W. Beers, author of "A Mind That Found Itself"—the story of his own mental breakdown and recovery—who some twenty years ago started the movement resulting in the pioneer organization known as the Society for Mental Hygiene. Out of this beginning in New Haven in 1908 grew the present National Committee for Mental Hygiene of which Mr. Beers is founder and secretary. The movement has since become international in scope; committees, societies or councils for mental hygiene having been established in Great Britain, France, Germany, Italy, Canada, Belgium, India, South Africa and many other countries. In May of this year, the first international congress of mental hygiene was held at Washington, D. C. Thirty-five hundred delegates from 45 states in the United States and from 53 other countries attended this conference.

All of you, and especially those whose main interests are in the educational field, are familiar with some of the ways in which this movement has affected our thinking and our procedures in connection with the problem of crime and penal institutions, our various hospitals for the insane, schools for defectives, different phases of state charities, our general educational procedures and so on. Not a few colleges throughout the country have well organized personnel departments to handle adjustment problems of students, particularly the younger groups. Principles of mental hygiene are employed as an aid to the individual in avoiding or overcoming anxiety

states and in clearing up other minor mental or emotional disturbances which, unchecked, often become aggravated to the point of wrecking the student's career.

By the time of our entry into the war, developments in mental hygiene had gained sufficient general recognition to enable this rather youthful branch of science to play a significant part in connection with certain phases of our military activities. In the book previously referred to Mr. Beers tells of the work organized by Dr., later, Colonel, Bailey, a member of the National Committee for Mental Hygiene who was commissioned in the Medical Reserve Corps and placed in charge of the work in neurology and psychiatry. A large-scale effort was made to eliminate the insane, mentally defective and psycho-neurotic from active service, over 72,000 men being rejected from the draft army on account of these disorders. Largely because of this general program there was a relatively low incidence of mental disease in the A. E. F., the rate for suicides was exceptionally low and the amount of crime was also relatively small.

While this work, which included the psychological testing program that developed the Alpha, Beta and trade tests, was going on in the Army, Dr. H. S. Hulbert of Chicago—then a naval officer—was building up the Psychiatric Unit at the Great Lakes training station of the United States Navy. Recruits clearing through Great Lakes by the tens of thousands were examined for the purpose of weeding out the mentally deficient and the mentally and emotionally unstable, who either were in need of institutional care at that time or were likely to break down completely under the stress of naval life and become serious problems on board ship or elsewhere. Later on, the psychiatric technique was used to aid the returning soldier who might be suffering from shell shock or other mental and nervous disorders. Modern developments in mental hygiene are now being applied in the government hospitals for veterans still in need of such care.

It is rather to be expected that these developments in mental hygiene could not acquire such an impetus without extending their influence in other directions.

For a considerable period industry has of course recognized the importance of physical hygiene and of recent years has been coming to recognize the significant part which mental health plays in the total well-being, and hence the effectiveness of the man on the job.

It might be well at this point to mention that in using the term "job adjustment" we are considering the relationship of the worker not only to his immediate tasks but also to his total working environment, inasmuch as the effective performance of specific duties depends upon his making a proper adjustment to the total work situation.

The worker's physical health has a direct and very important bearing on his adjustment to his job. His health affects quantity, quality and continuity of work and may even affect the safety of himself and others. The same thing holds true for his mental health. Mental depression or serious emotional disturbances induced by fear or anxiety could also result in lowered output, in poor quality of work, or in the diverting of attention at critical moments with results as serious as those which might occur from a physical breakdown.

Long before the term "mental hygiene" was used as such, industry in many practical ways was doing much to contribute toward the preservation of the worker's mental health. In many cases the things which were done to preserve his physical health were at the same time very practical as mental hygiene aids even when they were not thought of in that light. Man's physical life is so intimately bound up with his mental activity that we cannot consider the problem of mental hygiene in job adjustments without taking into account all of those things which have a bearing on the individual's general well-being.

What, then, are some of the practical developments which should be included in a survey of this problem?

While it is not necessary to dwell at length on the point, attention in passing should be called to the extent to which modern industry has provided a better physical working environment as the necessary foundation for making effective any program of physical or mental hygiene.

Changes in medical standards and practices as applied to the problems of industry have kept pace with improvements in working conditions. A modern industrial medical program will usually include a physical examination at the time of employment, facilitates for first aid treatment in case of accidents, emergency treatment of employees who may be taken ill on the job, and other features such as rehabilitation work. The latter involves the analysis of jobs in terms of their physical requirements, and a careful medical check-up of workers who through illness or accident may have become partially incapacitated. The individual is then placed on the work which will be suitable in view of his particular limitations, and which will also give him the maximum opportunity for development. This trend in the general direction of providing medical supervision to safeguard the worker's health and to assist him in making the best possible adjustment to his job from the physical standpoint is a significant contribution to the foundations of mental health.

The major advances of the past several years in the field of accident prevention, the development of sickness and accident benefit funds and the growth of various retirement plans have also had a practical mental hygiene significance to the extent to which they have been effective in offsetting some of the worker's age-old fears such as the fear of injury, the fear of loss of earning power, the fear of dependence in old age.

All of us, whether in our daily work or in outside activities, seek opportunities for self-expression, which is a basic requirement for normal physical and mental balance. We must, therefore, take into account as another practical mental hygiene consideration the wide-spread and growing interest in the field of industrial training. Training courses of all types are being provided on company time for the purpose of giving the individual the opportunity to develop within the limits of his abilities. This type of self-expression is of special value for the well being of the individual, inasmuch as it has a very practical bearing upon his ability to contribute to the job and accordingly to receive recognition for his efforts.

Being a social animal, man requires normal social contacts in order to maintain a healthy mental and emotional outlook. Recognizing this need, modern business organizations have cooperated with employees in their efforts to organize various social and recreational activities. Employee clubs, which are usually controlled by the employees themselves, cover a very wide range of activities, including all sorts of athletic enterprises as well as many other special features which represent hobbies for different groups of people.

In the May, 1923, issue of the Journal of Industrial Hygiene, Dr. F. W. Dershimer, who was at that time medical director of the National Lamp Works of the General Electric Company in Cleveland, emphasized the value of hobbies as a mental hygiene measure. Dr. Dershimer found the use of hobbies very effective in clearing up mental disturbances among people with whom he has worked. This method, in his experience, requires the least time to obtain results and has never caused any of the difficulties which are sometimes encountered in other methods, such as psycho-analysis. He mentioned that in the mild conditions the use of a hobby is sufficient in itself to cure numerous cases of what is commonly called "nervousness", and in that con-

nection sighted the example of a nervous executive who was cured through the hobby of simple gardening. When we think of the things which contribute towards preserving the worker's mental health, it is difficult to estimate the importance of a variety of wholesome activities outside of the day's regular routine.

The discarding of the old master-slave psychology in favor of a sympathetic understanding of the worker and of his intelligent and fair treatment by supervisors is another of the personnel developments which have contributed to maintaining the normal mental stability of the individual in our complex industrial civilization. The old-fashioned boss, the hard-boiled autocratic type, is rapidly being replaced by the modern supervisor who is trained to think of the job as an enterprise in which management and employees are cooperating in a common work. He knows that the people for whom he is responsible are individuals requiring individual study and treatment, and he endeavors to work with each one according to his requirements. This modern supervisor understands the value of proper appreciation and encouragement and realizes that men cannot be treated as so many impersonal production units or machines which function with maximum effectiveness regardless of their state of mind and emotions. As Dr. Dershimer has said in the article referred to above, the old family doctor knew the joys and sorrows of his patients and was their counselor and friend, and "we see now that he practiced mental hygiene, although he never heard the term". Likewise, the modern foreman without being sentimental or weak is practicing mental hygiene on the job when he builds up between himself and his subordinates a feeling of friendly confidence which makes it possible for them to talk over their difficulties with him and to seek his counsel and assistance in connection with the multitude of problems with which the average worker has to cope.

When we consider recent developments with reference to their bearing on mental hygiene in job adjustments, we must not overlook the importance of various methods of supervisory training which has of late been receiving an increasing amount of attention. Whatever is done in supervisory training to give the supervisor a better understanding of the most effective methods for handling employees, contributes to that extent as a practical mental hygiene aid.

In recent years there has been considerable emphasis on developments in specialized personnel activities having a bearing on mental hygiene. Among these have been included various psychological studies of industrial efficiency, such as the study of fatigue, etc., developments in scientific methods for selecting and placing the worker, and the use of clinical analysis in making complete surveys of the individual in need of vocational adjustment.

Scientific studies of illumniation as affecting accidents, the study of satisfaction and morale, the study of monotony and the effects of variety of occupation on output and fatigue, all research of this type has a definite significance for mental hygiene from the standpoint of the way in which these various factors affect one's mental and emotional reactions. This general field of research has been very well outlined in Professor Harold E. Burtt's recent book, "Psychology and Industrial Efficiency".

As concerns scientific methods of selection and placement, the individual who is on the work for which his natural abilities are best suited is likely to be most free from worry, unhappiness, and inefficiency, which in turn means increased probability of normal mental health. This is well illustrated by some interesting work carried on by the National Institute of Industrial Psychology in England. In the Textile Institute Journal for May, 1927, a brief summary is given of a meeting at which Mr. A. R. Knight of the Institute Staff traced the development of worry among workers. He showed how worry was associated with fear, which expressed itself in nervousness and timidity. Worry, unhappiness, and inefficiency were found to be caused frequently by the fact that many workers were not engaged in the occupations for which their abilities and temperaments best fitted them.

In this connection Mr. Knight cited an interesting and significant study of a large group of London children to whom vocational guidance was given. This included tests of intelligence, of scholastic achievements, of mechanical and other special aptitudes and abilities. The advice also included consideration of the childrens' own inclinations as well as other information from parents and teachers. In a follow-up made some years later to check the results, it was found that approximately 80 percent of those who had taken the Institute's vocational advice were satisfied with their work, prospects, and pay. They were also earning more than those children who had not taken the Institute's advice, of which group less than 40 percent were satisfied.

A good illustration of the effect which improper placement may have on mental stability was given us in a personal contact with Dr. C. E. Beeby of New Zealand, who incidentally is organizing an institute there to carry on the same type of work as is carried on by the National Institute of Industrial Psychology in England. This was an account of the career of two boys in New Zealand, brothers who came of a good family. The younger, age 17, was mentally above average with an intelligence quotient of 135. The other, age 19, was definitely below average with an I. Q. of 75. The younger and brighter boy had a passion for adventure. He was turned down for the navy on account of his vision, but he ran away to sea as a stowaway, was caught, and returned home where he was put on a job carrying lead in a newspaper printing shop. The job was much below the level of his ability with the result that he was completely dissatisfied and learned to hate his work. The older and mentally dull boy had a job in color printing, a skilled trade which required study of which he was incapable. The result was that he could not measure up to the job, was continually being called down for getting things wrong and therefore became generally dissatisfied.

In order to gain recognition, and satisfy his love of adventure, the younger boy, who was the leader, started in a small way to steal, afterwards setting things afire and leaving notes bragging of his deeds without revealing his identity. His mentally dull brother fell an easy victim to the schemes of the younger boy with whom he cooperated in these depredations. On one occasion they burned a gasoline storage place, starting a fire which it took several days to put out. On another occasion they set fire to an old wooden building, in the top story of which 200 children were gathered in a Sunday School meeting.

Dr. Beeby had examined the boys and testified for them at their trial for the purpose of giving the psychological findings as to their mental makeup and responsibility. After a careful analysis it was his opinion that, while obviously the case developed pathological aspects, the difficulty grew largely out of the original work mal-adjustments. The family was poor; the boys had no proper social outlets. They were badly misplaced on the job. The dull boy should have been put at the work of carrying lead, and the bright one should have been put on the color printing or at other work which would have challenged his mental ability and interests. Lacking proper satisfaction in their daily work with no other wholesome social outlets, these brothers started out to seek satisfaction in an unwholesome, anti-social way. The result was two lads sentenced for fairly long prison terms with ultimate prospects of making complete failures of their lives.

The case for scientific placemens it neatly summed up by Dr. J. L. McCartney, chief of the Division of Mental Hygiene, Connecticut State

Department of Health. Writing in the September, 1930, issue of the American Journal of Public Health he says, "If individuals are more carefully directed into the lines of work for which they are mentally and physically fitted, many of them will be prevented from later mental catastrophe".

While psychological tests are an important aid to mental hygiene, it has long been recognized that tests alone will not solve all phases of the selection and vocational adjustment program. The work of Dr. V. V. Anderson for R. H. Macy and Company of New York is an outstanding example of pioneering in the application of the psychiatric approach to this problem. Dr. Anderson has employed the clinical method in the study of the individual, using data obtained from psychological tests and information obtained from personal interviews. He has analyzed work failures from the standpoint of a complete personality survey and reported on the results of efforts made to improve employees who are mal-adjusted. Other studies included methods for selecting executives and scientific job placement and guidance of young workers, the latter study with a view to avoiding the work failures which occur frequently among young people simply for the lack of proper guidance in their first contacts with industry. An analysis was also made of qualities which distinguished good and poor sales-clerks and of the factors entering into company automobile accidents, together with methods for their prevention. To attempt a description of this material would be entirely outside the scope of the present paper and would very likely be unnecessary since many of you know of this work which Dr. Anderson reported in detail in his recent book "Psychiatry in Industry."

At the present time in connection with making total personality surveys we are dependent largely on personal interviewing contacts. The reason is obvious. Considerable progress has been made in measuring certain human characteristics such as general intelligence, so called, the various special aptitudes, etc. Much less has been accomplished in the measurement of the more elusive personality factors, which have a very significant bearing on the kind of adjustments the individual will make to his job and to other situations in life. Many experiments, however, have been carried on including such as studies of introversion-extraversion, psycho-neurotic traits, tests for ascendance-submission reactions, for emotional stability and so on. Whatever reliable data can be obtained from such studies will be an aid in making vocational adjustment surveys of the individual. In the meantime what information we have from various psychological tests, from statistical evaluations of other personal data including items such as experience, education, etc., and from the personal interview itself, is being used in making a complete evaluation of the worker in connection with his original selection and placement, with his later development including training and transfers on the job and with the solution of difficulties where problems of adjustment may develop.

In an article on Mental Hygiene Considerations in Business appearing in the "Nation's Health" for February 1927, Dr. H. W. Stevens, then medical director for the Jordan Marsh Company of Boston, called attention to some of the limitations of mental hygiene in industry. In general his position was somewhat of a challenge to mental hygiene to provide a more effective working program.

While the solution of the problem for business as a whole is certainly not complete, definite progress has been made and a method of attack has been shown in the work carried on by Dr. Anderson, already referred to, and in other studies such as those made by Dr. H. P. Elkind who has investigated the types of mental instability encountered in department stores and factories in Massachusetts.

After thus, however, calling mental hygiene to account, Dr. Stevens goes on to emphasize the part which industry must play in creating a wholesome environment in which mental health can thrive. He suggests in speaking of the devitalization of food by our modern processes of preparation that just as we need vitamins for physical health so "mental health seems to require for its sustenance a kind of mental vitamin. Something that is contained in the 'daily bread' of rugged honesty and candor of practical human relations and often lacking in the intellectual cunning and finesse of civilization out of which have been refined some of the vital necessities of life relations.

"In business, perhaps more than elsewhere, is manifest the disposition to condone, to capitalize, or even to glorify the specious and false for temporary advantage. Insofar as this tendency exists industry has an unwholesome influence upon the individual. Nothing so aggravates the confusion of the diseased mind, nothing is so blighting to the well mind as an environment of hypocrisy. . . A business will do well to see that no organization practice or policy does violence to the self-respect or undermines the self-reliance of its workers."

Without any doubt industry has taken long forward strides during the past few decades in the development of higher standards and ideals in the discharge of its obligations to those who labor to create products as well as those who purchase the products. Many organizations have developed a morale and traditions which greatly stress ideals of service to the community. They have likewise given equal emphasis to the building up of personnel relations founded upon honesty, integrity and consecutive service in all their dealings with employees. This general problem as raised by Dr. Stevens is certainly an important consideration inasmuch as it is concerned with building the right atmosphere, the very foundation for all effective personnel work and particularly for developments in the field of mental hygiene.

In so short a time we could not hope to elaborate any phase of the detailed problems of mental hygiene in job adjustment, but what we have reviewed indicates at least the significance of this type of work. The preservation and improvement of the worker's mental health in connection with his adjustment to his job involves of course more than whatever techniques may be worked out in any given commercial or industrial situation. The whole question begins with a consideration of the individual's early life, including his development in school.

The importance of this problem is emphasized by figures which Dr. McCartney gives in the article previously referred to. The physically sick in our hospitals are outnumbered, Dr. McCartney tells us, by the mentally sick." . . . one out of every seven families," he continues, "shows a history of insanity. Thus we find that out of the 24,000,000 children now in our schools, at least 1,000,000 are destined to be blighted by mental disease, unless mental hygiene is applied; but it is encouraging to note that at least one-half of mental disease is preventable."

So much of his later stability and success, then, depends upon the kind of schooling the individual gets in his early environment. Those of you in the educational world realize the significance of the problem and appreciate the value of the mental hygiene work carried on among students of various ages. It is your responsibility to train youth to meet the facts of life; to learn, as the psychiatrist would say, to face realities and to make the most of his natural capacities. When he leaves school and goes out to earn his livelihood, it then becomes the task of industry to do its share in promoting his mental as well as his physical welfare.

This, we have seen, industry for a long time has been doing in many practical ways. It has recently increased its efforts in this direction through specialized scientific developments.

THE TRAINING OF CAR REPAIRMEN

By Arthur J. Rowland
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Perhaps for the sake of those who do not happen to be familiar with some of the special features of industrial education, I may be permitted a few sentences as a background for what I shall state later.

In the training which goes with attendance on regular school, the aim seems to be mainly to get pupils to learn enough so as to get a passing grade and qualify for promotion into the next subject or the next group of subjects. Even in vocational education this appears to be the case. Recently a well-known director of such work in Wisconsin stated frankly that he hoped that pupils in vocational schools would learn enough to retain one-tenth of the amount of material which was presented to them. But in job training it is assumed that the person under training gets the whole of that in which he is trained, and gets it on such a basis that he is able to use it.

Industrial education has to be of such sort that the results obtained justify the expense. This is especially true in job training. Unless the cost of the training is less than the results which are gained, measured on a dollars and cents basis, no one is going to be interested in such a program. Business cannot be conducted so far as training is concerned, on the same basis as that which controls a great amount of school work.

One of the difficult things about industrial education is that to do a good job there must be an organized plan and arrangements such that the necessary time can be found for the training, while there must also be teachers who know how to teach and will do a job of excellent quality. In some fields of industrial education it is thought that the foreman ought to be this teacher. But in a well-organized establishment a foreman is primarily a production man, and the qualities necessary for that are quite different from those which make a good teacher. He is also usually a very busy man and finds it very hard indeed to arrange a program of teaching material, while he usually knows nothing at all about methods of teaching.

The training which I am going to try to describe briefly has been in operation for a dozen years. It is only recently, however, that it has taken its present form and gained the completeness which characterizes it today. Throughout the whole time, it has been found to be of so much value that no one has given any consideration to the rather large expense of time and effort which has been put into it.

The job of car repairmen is a sort which does not admit of an ordinary apprenticeship. It is sufficiently specialized so that one cannot go into the open market and find men with the necessary qualifications as one can for a great number of common and recognized trades. A man who can qualify for this work must be at least 22 or 23 years of age, and preferably somewhat older. He must have a good physique and good health. He will be working under conditions, especially in the winter time, very different from those ever faced by the shop worker. After he has been trained and become expert he has the ability and knowledge necessary to do the maintenance and repair work necessary to keep any of the cars of a system in thoroughly good running order. He has to know enough about brakes and trucks so that he can do all the maintenance and repair work necessary, up to the development of major faults or failures. He must know how to take care of all oiling and lubrication on cars. He must know how to do maintenance work and minor repairs on motors of all the sorts found on the cars. He must know all the electrical connections of the equipment including those through which the control of motors is managed so as to find defects and make repairs wherever such develop. He must know the whole equipment with such familiarity that he can detect the nature and seriousness of defects or failures which are reported by car operators, and can locate and fix them.

In connection with all this work, he must not only know how to do it, but must be sufficiently acquainted with it so that he recognizes the symptoms, gets at the cause and produces a remedy quickly. Sometimes his knowledge and skill give the only means of avoiding serious delays on the system. He has a real responsibility for reliable service and good customer relations. A modern street car carries a quite complicated mechanism. The man who can do the work outlined is a real tradesman, not only in some particular line, but in a variety of lines, as the description which I have given readily indicates.

In the company from which I come there are one hundred and twenty-five car repairmen, and at the present time two men give full time to job instruction work. This happens to be a rather temporary arrangement made so that both day and night work can be satisfactorily managed. There are eight carhouses located at various points in the railway system. It is at these carhouses that the railway equipment is inspected, repaired and cleaned so that the equipment will remain in service with as few delays as possible. In order to do this, it is necessary that the men located at these car houses be trained in the proper methods of inspecting and repairing our equipment. The instructors pass from one station to another as the work demands.

In order to tell the story of job training, it might be well to start with a new man who is applying for a job. The first step after meeting physical requirements set by the medical department is to have the applicant take the selection test. The purpose of giving every applicant a selection test is to provide the carhouse division with men who can be trained to do the highly skilled type of work required of them. It so happens that railway equipment is becoming more and more complicated each year. This brings it about that more and more careful and intelligent inspection is required as well as a higher type of repairman to do the work. Tests are given to be as certain as possible that the applicant has the right type of personality to fit into the organization, the general intelligence he has, his probable aptitude for mechanical work, and so far as it can be judged, his liability to accidents. It is a requirement that he shall be able to read and write and have enough abstract intelligence to successfully manage the program of training described later. The selection procedure, of course, does not set such a high standard that only applicants who may become the highest type of workmen are employed, but we do like to get an indication of which applicants are the most likely to become the highest type of workmen.

After a man has been recommended to become a car repairman as a result of the selection test, one of the instructors is immediately notified that a new man is going to start work at such and such a station. For the first three days the new man is on the job, an instructor stays with him and acquaints him with the general surroundings, and the elementary jobs connected with the work for which he has been selected.

Before describing this procedure further, it is necessary to describe the various types of work performed by car repairmen. The following list gives the job names for the various types of repair work in the order in which the repairman progresses:

Brake and truck
Lubrication
Electric Motors
Controllers and auxiliary wiring
Air equipment

The new man just starting in will begin, of course, with brake and truck work. In this paper we will limit ourselves to the training given to qualify a new man to become a brake and truck man.

The job training is organized into jobs numbered from 1 to 50. Thus:

Jobs 1 to 3—Breaking in
Jobs 4 to 19—Names of parts
Jobs 20 to 29—Inspection jobs
Jobs 30 to 50—Heavy gang jobs

Job No. 1 occupies the first three days with the instructor, at work on the regular program of maintenance which is constantly going on in each car station. The new man is shown how to take care of the work as it comes along each day. This job includes just three parts, the new man working as "top" man in the car.

Job No. 1—
a. How to operate a fender
b. How to operate the sand valves
c. How to tighten bolts on the truck frame

The first day things are explained and the instructor shows how to do the work. The second day the man is working and some effort is made to speed up his performance. The third day the man is left pretty much to himself to do the work as he has been shown, but the instructor is there to help him out of any difficulty.

Job No. 2 consists of having the instructor visit the man on the job again after one or two days have elapsed since Job No. 1. The man is asked if he has had any trouble since the previous visit by the instructor. If he has, the entire situation is cleared up. At the same time a few thoughts are put into the new man's mind on the general requirements to become a certified brakeman.

Job. No. 3 is a third visit which comes about four or five days after the second visit and is a final check-up on the general routine of the job.

These first three jobs do not have any definite procedure to be followed, but it is planned to acquaint the new man with his surroundings and to make him as productive as possible right at the start.

Passing on in the program consider a sample from the second group of jobs—Names of Parts—

Job No. 4—Wheel and axle.

This covers a knowledge of the names of all the parts (about a dozen of them) and the purpose of each.

The next group of jobs has the title of Inspection jobs. One of them may be illustrated—

Job No. 22—Inspection from the pit.
a. Change brake shoes if needed
b. Change bottom rods if needed
c. Adjust brake rigging
d. Change axle collars if necessary
e. Motor suspension springs
f. Bolts and keys on truck
g. Minor worn parts
h. Final inspection and lubrication

There is one more group, that is called heavy gang jobs. For these special equipment is required and rather unusual care as well as skill. Take one as a sample—

Job No. 32—Change journal box.
a. Put on safety chain to protect motor
b. Slack off brakes
c. Set jacks and raise body
d. Take out top bolts from pedestal
e. Jack up equalizer bars enough to clear box
f. With pinch bar shift wheel and axle until box clears the inside pedestal
g. Take out the old and put in the new box
h. Release jack on equalizer bars
i. Replace pedestals
j. Lower car body and take off safety chain
k. Adjust the brakes

It may be noted that this program is all built up on a careful job study and that the whole procedure has the endorsement of foremen and engineers before being put into effect. The methods are the best methods known and, of course, the safest. Safety is taught as a natural part of the work and not by learning rules or as something to be thought of by itself. When the men are instructed in any of the jobs, the instructor is right with the man at his work, on company time.

When the repairman has completed all of the jobs satisfactorily and has made suitable proficiency in his daily work, he is given a practical test, which includes an oral examination as well as a performance test. The performance test is the actual doing of two or three typical jobs. This is something like a civil service examination. If he passes the test, he is called a certified brakeman. At this time he is given a Certificate of Proficiency which states that

"John Doe, brake and truck man, at this date on the Car Repairman's Force of the Rolling Stock Department, The Milwaukee Electric Railway and Light Company, has been examined on his ability to handle his work well, both by practical tests on the job and by questions on things relating to his hand skill and knowledge of his work, and has been found a capable man worthy of recognition in this formal way."

Accompanying this is a letter of congratulations from the head of the department in which the man works. When an opportunity comes for promotion to the next job, the best certified brakeman on the system is offered it.

The next job according to the list given previously is the lubrication job, and when a man is promoted to this job, he is trained by a similar method. He is carried along through a series of typical jobs in order to do the new work efficiently. This procedure continues until all five job training courses have been completed, at which time the repairman is recommended by the educational department as a Class A repairman. This classification is not given to the man without the approval of the general carhouse foreman. Class A repairmen are then classed as troublemen and may be expected to go out on the road and with speed and skill meet any type of trouble developing on the cars.

Up to this point the description of job training work for car repairmen has included what is compulsory, since repairmen are required to receive this instruction. However, in order that a repairman might improve his abilities and become more enlightened as to why his work is done in a certain way, a series of related coures are offered. These courses are given in the class room and class room methods are used, the text books being manuals specially prepared for the purpose. This work is offered on the men's own time. There are at present 97 men enrolled in the optional courses (77 per cent of the whole number) some taking more than one subject. The subjects which are offered are—

Railway Trucks and Rigging
Railway Lubrication
Type "K" Control
Railway Motors
Auxiliary Wiring City Cars
Railway-Car Door Control
Safety-Car Air Brake
Straight Air Brake
Type "M" Control
H. L. Control
Auxiliary Wiring Interurban Cars
A. M. M. Air Brake
A. M. U. Air Brake

Before the paper closes a few words may be written to show how such a program can be justified.

The usual measure of quality of work done by car repairmen is the number of "pull-ins". A pull-in is a car in which some fault has developed on the road which can be charged to the maintenance force. The statement is always made in terms of the number of car-miles per pull-in. The record shows a change for the better such that for city cars the number of car-miles per pull-in has increased about 6½ times in the past ten years. For interurban cars the corresponding figure has increased nearly 15 times in the past five years. Such a change is due to more than one cause, including

a. Better maintenance due both to training and closer follow-up
b. Better work and general inspection in the shops
c. Better operation by platform men due to training
d. Cooperation among all company departments

But the training work is given a large share of the credit.

Still another way to measure the value of training is to look into the

accident record. The number of lost time accidents to car repairmen has dropped to one-seventh of its previous number.

The value of the training is, therefore, established on these counts.

1. Great increase in car miles per pull-in.
2. Great reduction in accidents.
3. More cars are added to the system each year, but a smaller number of men handle the maintenance.
4. Development of pride of the men in the knowledge and skill they have gained.
5. Foremen have an increased appreciation of the tradesmen they control and the kind and type of skill they have.

By-products of the training have been:

1. Use of the same trade language at all stations; one means of facilitating transfers of workers.
2. Establishment of the one best way to do each kind of work.
3. A definite line of promotion established up to and including foremanships.
4. Standardization of the tools used on the work.
5. Every year some new equipment is installed on cars (due to advance in the art) and a definite method of training old workers to know it and properly care for it has been found.

VOCATIONAL TRAINING—AN AID TO INDUSTRY

By BRENT N. RICKARD
Manager, El Paso Smelting Works, American Smelting & Refining Co., El Paso, Texas

Confronting the employer of labor today is the problem of securing young men and women who have been so trained that they may easily be fitted for skilled and semi-skilled work in industry. Modern industry is not only a large employer of labor but is also a large contributor to our school tax funds. As such, industry has a right to expect its tax money to be spent in the education of the future industrial wage earner just as fully and as carefully as in the education of those who find their way to college and the professions.

This phase of education for the sons and daughters of our tax payers is today admirably handled by our Vocational Schools. Young men and women now have the opportunity of fitting themselves for industrial work to an extent never before realized. Many are taking advantage of the opportunity thus offered, particularly those living in communities adjacent to large industries.

The Vocational Schools, through cooperation with industry, have a remarkable opportunity for aiding boys and girls in vocational guidance, in helping them to higher levels of good citizenship, and in teaching them the ideals of service to themselves and to others.

In showing our young people the way to profitable and happy lives our Vocational Schools are aiding our industries by supplying them with better trained and educated "raw material" with which they may turn out, after a period of practical training, a fine class of skilled craftsmen. This is only a fair return to industry for its contribution to the school tax funds of our country today.

The El Paso, Texas, Vocational School is performing just this kind of work. Down here on the banks of the Rio Grande just across the river from Jaurez, Mexico, we have a population which is about 40 percent Mexican. Some are native born citizens of the United States but the majority are relatively poor, uneducated and illiterate immigrants from Mexico who have come to us in the past ten to twenty years. The children are bright, intelligent and eager to learn. The Vocational School is fitting them to become citizens of whom we may be proud; boys and girls who will take their places in the industrial and social life of our country, largely because of the training they are now receiving. And because of this training industry is bound to profit through a better trained and more intelligent personnel.

Lying just outside of the city school district of El Paso is an industrial section known as the Smelter District. Here is located the El Paso Smelting Works of the American Smelting & Refining Co., the Southwest Portland Cement Co., the El Paso Brick Co., the Courschesne Rock Quarries and the Rio Grande Power Station of the El Paso Electric Co., a subsidiary of Stone & Webster, Inc. By far the great majority of workers in this district are Mexican. They are poor, uneducated, and many can neither read nor write. Their children, however, are hungry and thirsty for education, particularly along vocational lines.

Recognizing this condition, the former County Superintendent of Schools, Miss Lillian Huggett, prevailed upon the School Board of the Smelter School District to try out a plan of vocational education under the Smith-Hughes program. For this work we were fortunate in securing the services of Mr. Miguel Carrasco, an employee in the Electrical Department of the El Paso Street Railway Co., and an ardent believer in the ability of the Mexican boy and girl to become a worthwhile citizen if given the educational opportunity. This belief has been more than justified in the subsequent records made by Mr. Carrasco's pupils and graduates at the Smelter Vocational School. The following is an extract of Miss Huggett's report of March 1st, 1928 to the Research Bureau of the University of Texas on the subject of Smelter Vocational School.

"In 1924, Miguel Carrasco was employed by the School Board of the Smelter District to open a trade school, and begin vocational training of the boys in the district who had dropped out of the Grammar School, but were unemployed and with no means to fit themselves to earn a living. Mr. Carrasco went out through the streets of the district to find his pupils, visited their homes, advertised by means of handbills and posters, and succeeded in gathering together about twenty pupils. The Smelter Company furnished an old storehouse for his use, and with his class entirely untrained in the use of tools he undertook to renovate the building for school purposes.

Windows were put in, the floors mended, the roof repaired. Water was piped from two hundred yards away, wiring was installed, a forge made, machinery installed, carpenters' benches built, desks for mechanical drawing constructed, lockers built, and many other jobs necessary for the school were accomplished in the first three months of the school's existence. When the building was partially ready, school opened, and the boys spent each morning in the schoolroom studying English, Civics, Mathematics, and Hygiene, and learning the elements of Mechanical Drawing. In the afternoon they worked in the shop, learning to handle tools, to work in metals and wood, to repair cars.

In two years those boys who began with the first class, were prepared to go to work in the shops of the Smelter. As each succeeding class came on, new courses were added when possible. Night classes for employed men were instituted. Some individuals took correspondence courses in Mathematics and Electricity under the direction of Mr. Carrasco, and the school became a center of intellectual improvement and trade activity.

Athletic and social features were added early in the school's history. Basketball and baseball gave the boys a new zest in life, and taught them sportsmanship. Books and magazines gave them information, and social gatherings in the evening proved as educational as the school work of the day.

In its third year, the Smelter Vocational School made a name for itself by successfully carrying out a building project in a most workmanlike manner. The trade class built the White School, a grade school building consisting of two standard sized schoolrooms, two offices, lavatories and hall. It is built of brick and equipped with

modern conveniences. The building and installing of the equipment was done by the boys, under the direction of Mr. Carrasco and Mr. Wood, instructor in carpentry in the City Schools. The work on this project demonstrates the practical nature of the training given.

Smelter Vocational School builds boys. It has taken many of them from the idleness of the street, and is turning them into useful American citizens. To the ambitious boy of the district it offers a means for self improvement and preparation for life work. The interest that its Principal has in every phase of a boy's life, and the enthusiasm he inspires in his pupils, has been the largest factor in making the work of the school a success. It is unique in its equipment, its program, and its results."

The Smelter Vocational School is now in its seventh year and there is no question in the minds of those living in the vicinity as to the merit of the work performed by this school. The pupils have benefitted in many ways. They have become imbued with higher ideals, they are making better citizens than they would have been without this training. All of the boys who have attended the school have secured better paying work as mechanics helpers than they would have had they gone to work as unskilled labor. The graduates of this school are much sought after by the industries in this locality as well as by the railroad repair shops of the Southern Pacific and Texas and Pacific Lines.

Mr. Carrasco has, within the past year or two, augmented the regular school work by evening or part time classes attended by young men who are employed during the day time. Our Vocational School has served a two fold purpose; first, that of training young people for some profitable occupation or increasing their opportunities through further training in night classes; and second, in pointing out to them a better way to live. The School has served as a community enterprise employing directly or indirectly every phase of community life and welfare. This is particularly true in its part time and evening classes where every element of the wage earning population may be benefitted by the program.

The daughters of the workers living in this district, through the classes in domestic science and trade dressmaking, have learned how to become good housekeepers. Their mothers, through the cooperation of the Smelter Hospital Staff, have learned a great deal with reference to baby feeding and hygiene. The boys and young men have fitted themselves for skilled positions and their interest in education and what it has to offer has been stimulated beyond belief.

VOCATIONAL TRAINING IN THE RESTAURANT INDUSTRY

By A. H. Buck

President B/G Sandwich Shops, Inc., Chicago, Ill.

As an example of Vocational Training in the Restaurant Industry, I will outline the system of training our organization adheres to, but before so doing, let me briefly cover the situation in this regard as it pertains to our industry, the business of feeding people, as a whole at this time.

The realization of the value of vocational training for members of eating organizations started, of course, with the most progressive units in the industry, which—a little over twelve years ago organized into what is now our National Restaurant Association.

One of the basic reasons these progressive units had for forming the National Association was to create a more thorough understanding between the public and themselves by adopting educational methods for not only their organizations, but the owners themselves, of such character as to create a better feeling and understanding among the general public towards them.

It, of course, took some years for this educational program to become effective in operation, but during the last few years this perfection has developed tremendously till now the matter of vocational education is one of the prime services the Association gives to its membership. The material is carefully edited by committees and sent in printed form to each member in such a way that it can be used in his organization as it stands, or can be adjusted to fit his particular situation.

I believe in our institutions of learning, restaurant vocational training started with the training in schools and colleges, first—in the development of home economics courses, then the dietetic course and other technical phases of feeding people, with the idea of training girls in the art of homekeeping.

It has then followed a perfectly natural course, namely, giving them theoretical training that would help them in making the business of feeding people their vocation.

Starting as it naturally did in the educational institutions, with the idea of home economics training, principally all those that have taken the courses have been girls and women and, therefore, those in the eating industry today who have had theoretical vocational training are practically all women. The male force in the business have had their training through the University of Hard Knocks and Experience up to date.

True, there are many cooking schools of high standard, but in practically every case these schools are attended by women only and in the restaurant industry a larger percentage of the cooks are men, yet, whose education has been derived principally through practical sources. They have grown up in the actual eating establishment kitchens, their learning being acquired through actual practice with experienced chefs and cooks.

The day will come, I am sure, when the schools and universities will have departments for the education of the man end of our industry, that cover the various phases of the work that must be done, and will more and more connect theory with practice during the period of education, and in this way the graduates will be in a far better position and state of mind when entering their vocation than they are today.

A theoretical training in the business of feeding people is regarded by all of us as valuable, but unless those so theoretically trained are in a frame of mind after getting their training to accept the fact that they must again go through a period of training—*practical training*, before they can hope to hold a position of responsibility and command a salary that goes with it,—they are, in reality—in a worse position than before they got the theoretical training.

But where they realize this thoroughly and go whole-heartedly into the work at hand, which is put before them on becoming a member of an eating organization's staff, they have a chance to advance much more rapidly than those who have had no theoretical training, but are getting their training at first hand right at the start.

Mr. Sidney Hoedemaker, Vice-President and General Manager of the Pig 'N Whistle Corporation of Los Angeles, who operates several large high-class eating establishments on the coast, and who was to have covered our industry's examples before you today instead of myself, had it been possible for him to do so, is one of the principal advocates of vocational training in our business and has done more, I believe, than any man for its advancement.

The Waitress Training Course at The Frank Wiggins Trade School in Los Angeles was started in connection with the National Restaurant Association and the curriculum includes actual work in the Pig 'N Whistle restaurants of that city. Girls entering this course need have no particular qualifications other than a suitable appearance, although it is expected that they will have a high school education or its equivalent. They are taught the proper methods of service, the ability to interpret a menu, and a slight knowledge of dietetics in order that they can suggest a well balanced meal from the standpoint of health. Of course, they

are drilled on the necessity of personal cleanliness and the importance of absolute sanitation in the preparation and service of food. Because they work in the Pig 'N Whistle restaurants as a part of their training and because the course has had Mr. Hoedemaker's personal assistance at all times, we may be certain that the various subjects taught are of practical value in restaurant work.

This sort of course is not confined to the Wiggins school, but may find its counterpart in the Hadley Vocational School at St. Louis, or in the Girls' Vocational School at Baltimore. To mention a few others—courses relating to some sort of restaurant work are also given at the Boston Public Trade School for Girls and the Seattle schools. These courses, however, do not have the close cooperation of restaurants as does the Wiggins school.

I might mention a fact that I believe is realized by a few, namely, according to government figures, the eating business ranks first among retail business in point of pay-roll in our country. This fact alone should prove to those engaged in it, the importance of educated and efficient employees if they want their business to be a financial success.

I will now cover briefly the B-G Sandwich Shops, Inc., method of vocational training.

At the time of the applicant's acceptance to our organization, they having previously filled out an application form, the information thereon having been thoroughly investigated before they are accepted,—they are given a copy of our Standards of Practice and are told to read it carefully, and after doing so, to sign the pledge that has been given them with it. This pledge reads as follows:

"MY PLEDGE:

"I have a copy of the B/G working rules in my STANDARDS OF PRACTICE, have read them carefully and understand them perfectly. I realize that they are fair to both myself and our business, and essential to our success—therefore, I pledge myself to their adherence at all times.

"I further understand that it is my duty to carry out the ideals and policies outlined in the STANDARDS OF PRACTICE to the best of my ability".

Following this procedure, they are placed in an advantageous position in a B/G shop during a working day, where they can observe the actions as a whole, and especially the part they are to be trained to play when they enter into active duty.

We will take the case of a girl who is to become a sales girl, (other establishments call them waitresses). After this period of observation, the girl is then given very thorough training by a hostess in the making out of the order checks, the proper abbreviations to use, prices, etc. This course must be done very thoroughly to avoid mistakes.

The applicant is then taken into a dark room and shown the No. 1 film, which is entitled "Better Service". This film is not a moving picture, but shows in actual still pictures the operation of a shop from a guest's standpoint, as well as from the company's standpoint, from the time the guest opens the front door, until he pays his check on leaving.

Each picture covers a situation, and there are enough of them to cover every action that takes place. Many of these actions are covered in a series of pictures, one of course, showing how it should be done, and the others showing how it should not be done.

This film is gone over slowly so as to impress the new member with the importance of doing things the right way.

The hostess then, by various questions, determines whether the entrant has sufficient understanding of the work they have to do to allow them to take the next step. If she is not convinced on this, then more drilling along this line is done. After the hostess is satisfied the girl is ready to proceed, the girl is placed, at slow periods, on our counter, between two well-trained girls and given—say, two seats to service for a day or so, the trained girl on either side of her watching her actions and correcting any errors that she makes.

After she becomes more proficient she is given more seats to service and all details of her actions are watched by the two more experienced girls till she has become a veteran like themselves.

The use of the film, however, does not stop with the education of individual members. Whole classes of the veteran members are drilled in the film from time to time, for at no time is perfection reached and drilling unnecessary to keep things up to standard.

This same method is used in training the man force of our ogranization, whose main duties as a rule, are those of preparing the services. (We call them our blockmen).

A similar film is used in their training, called the "B/G Blockmen", and the process of training is the same in their case as with the girls.

A third film is used by the entire operating force, called "B-G Food Preparation". This film covers not only the preparation of the food itself in the shops, but the eye appearance of it at the time of its service to the guest and the methods to be adhered to in assembling the articles themselves, singly and collectively.

One engaged in the service of feeding people must realize that it is a service calling for the practical use of both *Art* and *Science* at all times. One must like any business to be a success in it. There is no business that gets so close to the human element in a person as the business of serving them their food. Those who do it, must do so graciously, pleasingly and invitingly, and those who excel in the use of the human touch are the ones that are successful.

My professor in Chemistry—the late Dr. Long of Northwestern University, once told our class—"All that I can do at the University is to teach you how to use the tools of education. What you do with them after you know how to use them is your responsibility".

And I believe this holds good in restaurant vocational training. It teaches one how to use the tools. It's the use they make of them that actually tells the story.

TRADE TRAINING
IN SCHOOL AND PLANT

by

HERMAN S. HALL

State Supervisor of Trade and Industrial Education, and Director of the State Trade School at New Britain, Conn.

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WHERE AND HOW

Continued from Page 36

to him may carry out a fruitful program, in the long run, it is safer to place complete responsibility for supervision in the hands of those directly responsible to the superintendent. A clear distinction in such a program must be made between supervision and teacher-preparation. The task of the local supervisor is to give individual attention and specific assistance to the teachers in service, but with the present tendency in the American public schools to minimize "snoopervision" and increase greater efficiency in the individual worker, it is questionable whether this type of teacher-preparation should be much encouraged.

Although the State Department of Public Instruction delegates its vocational teacher training program to three institutions under State control, the responsibility for carrying out the program rests with the Department of Public Instruction. Every course for the professional improvement of vocational teachers must be approved by the Department of Public Instruction, and this is always done in conference with the Bureaus responsible for teacher-preparation and for vocational education. A detailed analysis is required of the enrollments, length of course, name of teacher and where the course is to be given. A "*control-chart*" is used in connection with each institution approved for vocational teacher-training and only those courses which have been approved may be given at the places designated if Smith-Hughes funds are to be used for subsidizing these courses. It frequently happens that requests come directly to the Department of Public Instruction from superintendents, requesting specific types of courses for vocational teachers working within their district. It then becomes necessary to assign a member of the instructional staff of one of the accredited institutions to this school district and provide the type of course which, in the light of the judgment of the superintendent, will best serve the needs of vocational teachers employed within the school district.

The University of Pennsylvania, located in the eastern end of the Commonwealth, offers both resident courses and extension courses in the field of industrial education and home economics. Here are enrolled 290 students in the industrial-teacher training classes for the present year 1930-31, while 150 home economics students were given specific basic professional training at this institution. The University of Pittsburgh, located in the western end of the State, enrolled 236 vocational teachers in the approved industrial education courses and 37 young women received professional preparation in the field of home economics. Pennsylvania State College, which is responsible for the central area of the State, enrolled 239 industrial teachers and 41 home economics teachers. Pennsylvania State College offers the only approved vocational teacher training curriculum in the field of vocational agriculture; in this institution 35 resident students are enrolled.

Through personal visitation by members of the Department of Public Instruction and regular reports, the State Department is kept informed as to the effectiveness of its vocational teacher training program. Each institution, through its director of vocational teacher training, is required to submit periodic reports concerning the progress made.

In conclusion, it must be borne in mind that industrial teacher trainers in accredited institutions are teachers who will, in turn, prepare teachers of trades; complete familiarity with at least one trade is part of the essential equipment of such an instructor. In the vocational-home economics field, teacher trainers must have the necessary vision to recognize home making as a vocation; those who are engaged in the preparation of teachers for the field of vocational agriculture must recognize that the concrete objective is to prepare young men who will, in turn, desire to enter the field of agriculture as a vocation and not primarily as an avocation. Where the vocational teacher trainers, working out from accredited institutions, have this vocational bias together with an appreciation of the five-fold aims of a public school system, such education will achieve that which it hopes to realize.

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BOOK REVIEWS

WOODWORK IN THE JUNIOR HIGH SCHOOL, By W. E. Roberts. The Manual Arts Press, Peoria, Illinois.

Rarely does a book come from the press in which one can gather from each page the spirit of the man who wrote it, as in this one. Those who know him best recognize in it the realization of a life effort to adapt a subject to the training of boys.

This is no narrow technical treatment of woodwork but is the result of the artist's conception of the subject based on adequate technique.

It is inspiring to find such a contribution in this metal working age to an old subject which is rapidly passing from our schools. No teacher should fail to place this book before his boys. —*Ammon Swope.*

MACHINE SHOP WORK. By Farner, Perrigo and Fairfield. American Technical Society, Chicago.

This book written by men who are in contact with the rapidly developing field of machine work is an excellent contribution.

The divisions of the book take up such things as Hand Tools, Power driven tools, Laying out work, Gear Cutting, Turrett Lathes, Automatic screw machines, Modern Manufacturing, Air tools and the slide Rule.

This book could be very useful in a machine shop library in school or in industry.

MACHINE DRAWING. By Griffin and Fortman. American Technical Society, Chicago.

As the name implies this text covers all of the general principles that apply in machine drawing. The authors are practical men in this field and the text is well illustrated.

This book could be used as a text in advanced drawing in high school or in college.

ELEMENTARY WROUGHT IRON WORK. By J. W. Bollinger, Tulsa, Okla. Bruce Publishing Co., Milwaukee.

Here is a text covering the simpler form of iron work as they might be used in a junior or senior high school. Most of the book deals with forging and cold bent iron but part of it is given over to machine work of the simplest kind.

The book is well illustrated and the designs applied to many sample pieces are very good. An excellent text for the school shop library.

FIBER FURNITURE WEAVING. By Emil Gandre, Sheboygan, Wis. Bruce Publishing Co. Milwaukee.

In many schools the weaving of a piece of fibre furniture forms part of the program of industrial arts. This book explains the various types of weaves and illustrates them. Sample pieces of furniture are shown and the tools needed to do the work are shown. This is a good text for the shop library. —*Geo. K. Wells.*

LIGHTFRAME HOUSE CONSTRUCTION. By Federal Board for Vocational Education—$.40.

May be secured from Bureau of Foreign and Domestic Commerce or Superintendent of Documents, Government Printing Office, Washington, D. C.

This is the best book ever issued on the subject, says Frank Duffy, General Secretary of the United Brotherhood of Carpenters and Joiners. We recommend that all directors and teachers of this type of work secure a copy for their school.

INSTRUCTIONAL REVIEW TESTS IN MECHANICAL DRAWING. By Nash-Van-Duzee. Bruce Publishing Co., Milwaukee, Wisconsin.

The statement to the student on the first few pages of the loose leaf set says:

"The Review Tests in Mechanical Drawing are designed for the important purpose of telling you whether or not you have really learned the unit of work. It will also tell you how you rank with the other students. Instead of waiting until the end of the semester or year, you should review each unit, which the teacher thinks you have not satisfactorily completed."

The description of how to grade the tests is excellent reading material for any teacher and could be applied to other work. The tests are arranged to cover all types of drawing and will add materially to any teacher's effectiveness in this field.—*Geo. K. Wells.*

INSTRUCTIONAL UNITS IN HANDWORK. By F. E. Tustison and A. G. Brown. Bruce Publishing Co., Milwaukee.

This book is written in the familiar instruction sheet style. One is impressed with the numerous illustrations given in connection with the units of work. They are so well done that a beginning student should have little difficulty in learning the various operations. The types of jobs selected are such that any teacher may use the text for a sequential course of instruction. The incidental display of the correct use of the various woodworking tools is one of the fine features of the book. —*Ammon Swope.*

GENERAL MECHANICAL DRAWING. By R. A. McGee and W. W. Sturtevant. Bruce Publishing Co. Milwaukee.

This is a text designed by the authors to meet the needs of the junior high school students. The elementary phases of drawing are taken up in a few lessons followed by applied drawings in such fields as pictorial and free hand sketching, machine drawing, applications to sheet metal and structural steel. Other subjects treated are architectural drawing, map drawing, electrical drawing and statistical charts. While the range of drawing is somewhat extensive, the material presented is authentic and is put up in such an interesting style that the text should be a very good one for the junior high schools.—*Ammon Swope.*

GUIDING RURAL BOYS AND GIRLS By Hatcher and Ferris. McGraw-Hill Publishers. $2.50.

The problems of guidance for Country Children is particularly difficult and at the same time especially important at this time. We are fortunate indeed to have available at the moment this book of Hatcher and Ferris.

The book is outlined in seven parts. In the Introduction the authors have made use of Material gathered by the Southern woman's Educational Alliance in Case Studies of certain school and rural communities of the South. They present these summaries as a Factual Basis for the Guidance Programs.

Part one deals with Learning to understand the Boy and the Girl; part two, Adjusting Education to the Individual Boy and Girl, as Learned; part three, to Vocational Guidance; part four, to Setting up a Guidance Program; part five, to other Aspects of Guidance; and part six, to Unifying the Guidance Program.

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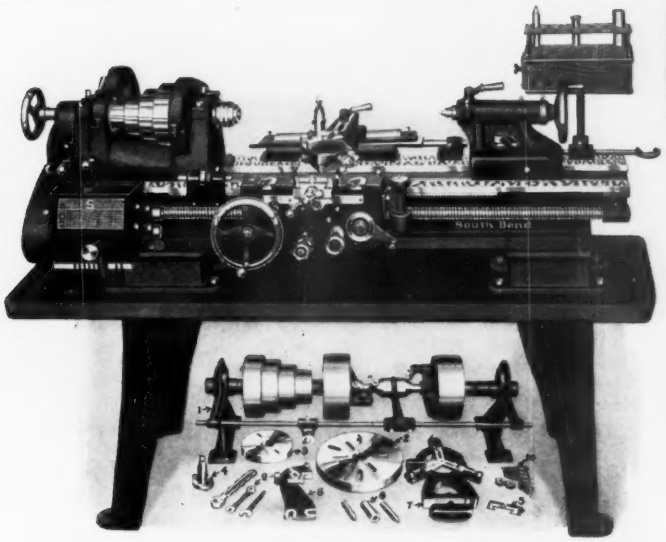

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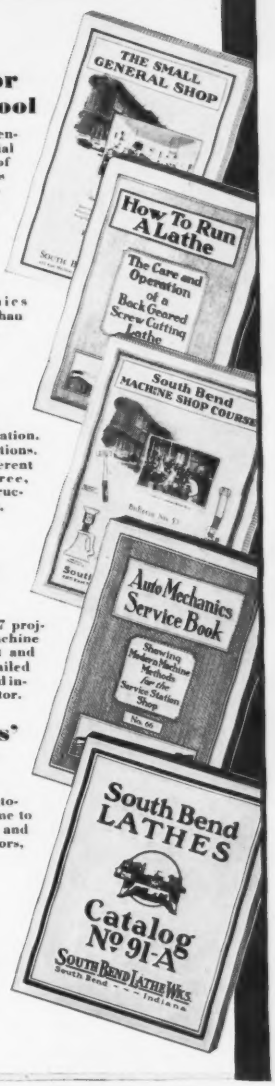
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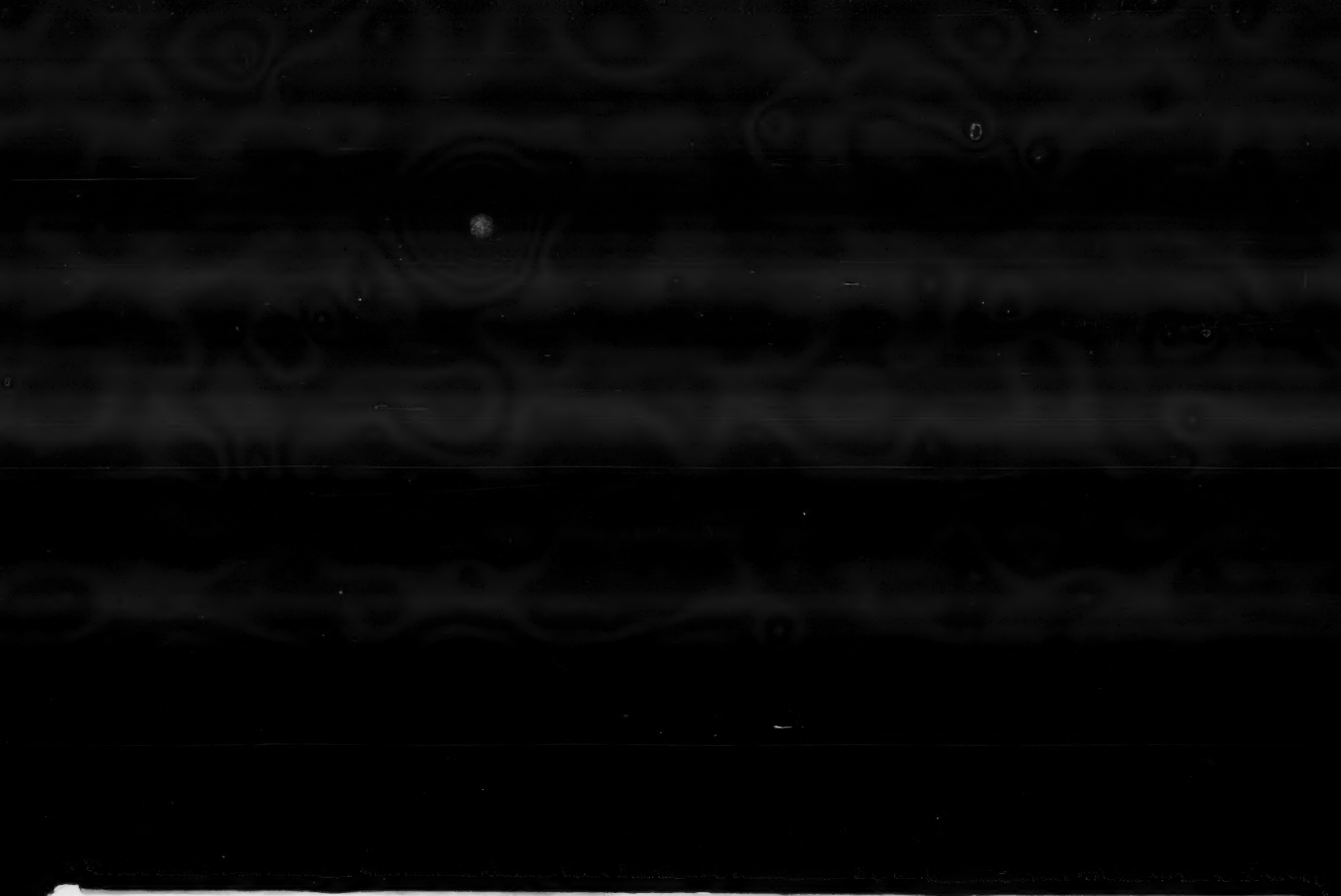
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